

ROCK-DRAWINGS OF SOUTHERN AFRICA



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ARCHAEOLOGICAL SURVEY OF EGYPT

ROCK-DRAWINGS

OF

SOUTHERN UPPER EGYPT

I

SIR ROBERT MOND DESERT EXPEDITION

SEASON 1936-1937  
PRELIMINARY REPORT

BY  
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FOREWORD

My excavations in the cemetery of Erment not only proved the existence of man from a very early time, but also the presence of fragments of very coarse pottery which bore great resemblance to similar fragments found right across the width of Africa. This fact was unexpected and interesting, especially as it raised many new questions. I hence entrusted to Dr. Winkler, whose desert work was already well known, the examination of the valleys between the Nile and the Red Sea, preliminary to the examination of the Western Desert, searching and examining and photographing the traces of early men and their rock-drawings in these valleys.

The present volume, which represents the results of his work in the winter of 1936-7, illustrates the diligence and skill with which he has brought together the many interesting and important facts. The different races of men, the early hunters, the early nomads, the people who still remembered having used high-prowed wooden ships on the Red Sea, and the inhabitants of the Nile valley using the early papyrus boats, the contemporary presence of elephants, hippopotami, rhinoceri, giraffes, and many kinds of gazelles, all point to a time when at the end of the last ice age heavy precipitation was characteristic of the climate and many of the deep valleys and hillwash terraces were still in the process of formation. It is difficult with our present knowledge to assign definite times and years to these periods. Our extensive studies of climatological changes in the northern hemisphere are gradually enabling us to correlate many of the facts, and I have no doubt that the present work will materially assist us in this task.

ROBERT MOND

6 May 1938

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## PREFACE

I HAVE first to express my thanks. It was entirely the interest and the generosity of Sir Robert Mond which enabled me to continue my researches in Upper Egyptian rock-drawings. He made it possible for investigations on the required scale to be started, so that we can foresee a day when a corpus of inscriptions, signs, and pictures collected from the Upper Egyptian deserts can be presented to the learned public, a corpus of material quite new, unexpected, and of far-reaching importance.

This preliminary report contains about one-tenth of the photographs taken during the season 1936-7. I have chosen the best and most instructive examples.

Every inscription or picture in the desert has been photographed without touching it up. In some cases the contrast between drawing and stone-surface was so poor that it was necessary to apply chalk (or rarely Chinese ink) to the drawing. I found the best way of doing this was to apply chalk-milk with a brush. These chalked-out photographs are registered as, *e.g.*, M 81a, M 82a, the non-chalked bearing the corresponding numbers M 81, M 82. Every drawing is provided with two numbers, the first number indicating the site, the second number the negative. Every photograph taken during the Sir Robert Mond Expedition has before its negative number the letter M. Some few of the published ship-drawings here bear only site numbers; these I copied by hand. The full collection of the negatives and prints is kept in the Library of the Egypt Exploration Society, where they may be seen.

The researches in the Western Desert near Armant were greatly facilitated by the kind help of Mr. O. H. Myers, Director of the Armant Excavations. He sent his desert-guard out to look for rock-drawings and thereby saved me much time. The important site 34 was discovered by Mr. Myers himself. Beyond this practical help the discussions with Mr. Myers of early conditions of life near Armant and generally in the Western Desert, and the days I spent in his camp, gave to this period of the last season particular interest and pleasure. Mr. Terence Gray was kind enough to accompany me on some of these excursions in the Western Desert. His help was very important at site 30, so rich in dynastic material. He read and copied many of the hieroglyphic inscriptions. Mr. Gray discovered site 33. Miss M. S. Drower, at this time a member of the staff of the Armant Excavations, came to site 34 and read and copied there some texts of dynastic and Coptic times.

In Luxor I discussed many problems with Dr. H. H. Nelson, Dr. S. Schott, and Prof. Kees, and had the further advantage of having the library of Chicago House at my disposal.

Mr. G. W. Murray, Director of the Desert Survey in Cairo, lent me his help as before and provided me with information as well as with maps. With Prof. A. M. Hocart in Cairo I discussed various ethnological problems raised by the rock-drawings. My friend, Mr. Joseph Dudler, of Cairo, lent me his wide knowledge of the geology and mineralogy of the Eastern Desert, particularly in the question of patination.

In England I had the opportunity of discussing many problems raised by these rock-drawings with various savants, especially with Prof. P. E. Newberry, Prof. C. G. Seligman, Dr. K. S. Sandford, Messrs. Sidney Smith, Keeper of the Department of Egyptian and Assyrian Antiquities, British Museum, H. J. Braunholtz, Assistant Keeper of the Ethnographical



Department, British Museum, H. St. J. B. Philby, and Capt. P. Johnston-Saint, Conservator Historical Medical Museum, Wellcome Research Institution.

In my study of the forms of the boats represented in the rock-drawings I learnt much from conversations with Mr. J. Hornell in London, and Dr. H. Nevermann in Berlin.

The discussions I had with Mr. T. H. Dunbar were of particular value to me. His collections of rock-drawings in Nubia had led him to observations which fortified some of my own. On the other hand, some divergences in his Nubian and my Southern Egyptian material seem to indicate the presence in early times of civilizations already differing north and south of the first cataract.

Miss M. S. Drower I have to thank again. She was kind enough to read the whole report in manuscript and in proof, and gave her help in many questions concerning dynastic inscriptions and problems of dynastic history.

Finally, I may be permitted to name here my 'Abbâdi camel-guide, Moḥammed 'Ammâr, with whom I journeyed so many days. In the loneliness of his desert he was more than a servant and guide.

H. A. W.

## INTRODUCTION

RESEARCHES in rock-drawings are a fairly recent province of archaeological work. These researches are especially connected with prehistory. Rock-drawings replace in some degree written records. We may not only learn from them different artistic conceptions, but we may also obtain rich information about dress, weapons, hunting, shipping, wild and domestic animals; sometimes we can even draw certain conclusions as to the religious beliefs and social institutions of the authors of such drawings. If it is, on the one hand, the new prehistoric interest which induced the field-worker to look for rock-drawings, it is, on the other hand, the result of modern facilities of transport that so many rock-drawings have been found all over the world, not a few of them from hitherto unfrequented deserts.

The area explored by the Sir Robert Mond Expedition during the winter of 1936-7 is situated in Upper Egypt between Qena and Aswân. Most of the work has been done on the Eastern Desert, between Quft and Qoşêr. The Western Desert—a much wider field—has been surveyed in two small separate districts: between Armant and Nag' al-Ḥamâdi, and in the south Ḥôsh and the adjoining Wâdi Sab' er-Rigâl.

Various travellers have observed rock-drawings in the deserts. But in spite of the growing interest in prehistory they received little attention. It seems that most of the explorers found excavation in the Nile valley so productive of results that it occupied their whole attention. Nobody expected important archaeological information from the rock-drawings in the deserts.

In the wadi joining the Nile valley at Quft and its tributaries, inscriptions and drawings have been observed and described by the following explorers:

J. COUYAT and P. MONTET, *Les Inscriptions Hiéroglyphiques et Hiératiques du Ouâdi Hammâmât*. Mémoires publiés par les Membres de l'Institut Français d'Archéologie Orientale du Caire. Tome 34 (Cairo, 1912).

В. ГОЛЕНИЦЕВЪ, *Эпиграфические результаты поездки въ уади хаммамâtъ*. Записки восточнаго отдѣленія императорскаго русскаго археологическаго общества, 2 (1887), 65-79.

F. W. GREEN, *Notes on some Inscriptions in the Etbai District*. Proceedings of the Society of Biblical Archaeology, 3 (1909), 247-54, 319-22.

R. LEPSIUS, *Discoveries in Egypt, Ethiopia, and the Peninsula of Sinai in the Years 1842-45* (London, 1852), 317-19.

(J. A. LETRONNE, *Recueil des Inscriptions Grecques et Latines de l'Égypte*, 2 (Paris, 1848), 420-52.)

A. J. REINACH, *Voyageurs et Pèlerins dans l'Égypte Gréco-Romaine*. Bulletin de la Société Archéologique d'Alexandrie, 13 (1910).

A. E. P. WEIGALL, *Travels in the Upper Egyptian Deserts* (Edinburgh and London, 1909).

A. E. P. WEIGALL, *A Guide to the Antiquities of Upper Egypt* (London, 1910), 48.

J. G. WILKINSON, *Topography of Thebes and General View of Egypt* (London, 1835), 421-59.

H. A. WINKLER, *Bauern zwischen Wasser und Wüste. Volkskundliches aus dem Dorfe Kimân in Oberägypten* (Stuttgart, 1934).

H. A. WINKLER, *Völker und Völkerbewegungen im vorgeschichtlichen Oberägypten im Lichte neuer Felsbilderfunde* (Stuttgart, 1937) (abbreviated in the text as *VVb.*).



In the Western Desert in the section circumscribed by the bend of the Nile between Armant and Nag' al-Hamâdi, rock-drawings have been observed and described by:

R. COTTEVIEILLE-GIRAUDET, *Gravures protohistoriques de la Montagne Thébaine*. Bulletin de l'Institut Français d'Archéologie Orientale du Caire, 30 (1931), 545-52.

W. SPIEGELBERG, *Ägyptische und andere Graffiti (Inschriften und Zeichnungen) aus der Thebanischen Nekropolis*. Heidelberg, 1921.

Near Hôsh and in the Wâdi Sab' er-Rigâl inscriptions and drawings have been found and described by the following explorers:

F. W. v. BISSING, *Vom Wadi es Saba Rigale bei Gebel Silsile*. Mit Beiträgen von Dr. H. Kees. Sitzungsberichte der Kgl. Bayer. Akademie der Wissenschaften. Phil.-hist. Klasse 1913, Abhandlung 10.

L. BORCHARDT, *Nilmesser und Nilstandsmarken*. Aus dem Anhang zu den Abhandlungen der Kgl. Preussischen Akademie der Wissenschaften vom Jahre 1906 (Berlin, 1906), 23-5.

A. EISENLOHR, *An Historical Monument*. Proc. Soc. Bib. Arch., May 3, 1881.

A. EISENLOHR, *Brief an L. Stern*. Zeitschrift für Aegyptische Sprache und Altertumskunde, 23 (1885), 56.

G. LEGRAIN in J. DE MORGAN, *Recherches sur les Origines de l'Égypte* (Paris, 1896), 162, 163, 164.

G. LEGRAIN, *Notes d'Inspection. Le Shatt er Rigal (Sabah Rigaleh)*. Annales du Service des Antiquités de l'Égypte, 4 (1903), 220-3.

G. LEGRAIN, *Inscriptions from Gebel Abou Gorâb*. Proc. Soc. Bib. Arch. 27 (1905), 129.

G. LEGRAIN, *The Inscriptions in the Quarries of el Hôsh*. Proc. Soc. Bib. Arch. 28 (1906), 17-26.

W. M. FLINDERS PETRIE, *A Season in Egypt* (London, 1888).

W. M. FLINDERS PETRIE, *Ten Years' Digging in Egypt*, 2nd edition (London, 1893), 74 sq.

A. H. SAYCE, *Karian, Aramaic and Greek Graffiti from Heshân*. Proc. Soc. Bib. Arch. 30 (1908), 28 sq.

A. E. P. WEIGALL, *A Guide to the Antiquities of Upper Egypt* (London, 1910), 349-51.

H. E. WINLOCK, *The Egyptian Expedition 1925-1927*. The Bulletin of the Metropolitan Museum of Art, Section II (New York, 1928), 16-24.

In spring 1936 I spent some weeks in exploring the rock-drawings along the Quft-Qoşêr Road and in adjoining wadis. This expedition enabled me to distinguish five different prehistoric cultures represented in the rock-drawings. The reasons which entitled me to ascribe many drawings to prehistoric times will be explained later on in this report.

The expedition of spring 1936 had by no means exhausted this small area. Later in the year Mr. Oliver H. Myers introduced me to Sir Robert Mond, to whom I showed my collection of photographs. He was immediately interested, and generously made it possible for me to continue my researches.

There were two alternatives: either to spend the season covering a big area, say, large strips of the desert on both sides of the river from Qena to Aswân and to collect from the main wadis and roads examples of rock-drawings; or to explore one very limited area thoroughly, so as to get as clear an insight as possible into the chronological sequence of the different styles in such an area, and to create in this way a basis for future researches. The second method was obviously the more useful. So I revisited the area of spring 1936.

## THE SITES

THE geological situation of the Eastern Desert between Qena and Aswân is the following. The eastern half of this desert is mainly formed of schists and granites or syenites. They reach considerable heights and form a watershed between short wadis flowing eastward to the Red Sea, and long wadis flowing westward to the Nile. The western half is formed mainly of sandstone. This stone is rocky and solid near the igneous ridge, and becomes crumbly and less solid the farther west it goes. Large parts of the desert near the Nile valley are even of recent formation. The sandstone area contains some considerable patches of limestone. The igneous eastern part, on the other hand, includes some small islets of sandstone. These proved to be of particular archaeological importance. In the igneous ridge spring wadis which receive many tributaries and finally join the Nile valley. The most northerly reaches the Nile valley at Quft, the next at Edfu, and the third, fourth, and fifth meet in the plain of Kôm Ombo.

The exploration of spring 1936 had mainly touched the wadi-system of Quft. To explore it more fully and to make it the basis for future researches was the first task of the Sir Robert Mond Expedition of 1936-7. Former visits to the igneous parts of this wadi-system had proved that they were exceedingly poor in rock-drawings compared with the sandstone area. Research in the Quft wadi-system has therefore been limited to this sandstone area. One reason for giving so much importance to this particular wadi-system was the fact that the way between Nile and Red Sea is here the shortest; here an old road furnished with wells crosses the desert.

The other task of the expedition was to obtain from rock-drawings some information about desert life in remote times on the western bank near Armant. The roads leading to Armant had especially to be surveyed. The geological formation is here quite different. On the eastern bank it was possible to limit the researches in an area limited already by nature, the Quft wadi-system. Here on the western bank no such limits exist. An endless limestone plateau borders the Nile valley. The edge touching the Nile valley slopes steeply down and is cleft by deep, quite irregular wadis. Many roads cross the plateau, following these wadis as far as possible. Some of the roads crossing the bend of the river between Armant and Nag'al-Hamâdi have been surveyed, but the roads leading to the oases and deeper in the desert had to be left for future work.

Finally, a very short excursion has been made to another spot on the western bank, to Hôsh and the well-known Wâdi Sab' er-Rigâl. The reason for this expedition was mainly to see how far the chronological sequences observed in the Quft wadi-system could be applied elsewhere. I chose Hôsh and its environs because I had studied some of its rock-drawings already in an earlier visit. The limestone plateau of the Western Desert is here separated from the Nile valley by the point of a huge sandstone wedge. The sandstone rocks touch the river and presented here, as elsewhere, an inviting surface on a durable material to the prehistoric and later draughtsmen.

The position of every site has been stated on the maps issued by the Survey of Egypt. Maps 1:100,000 could be used for the sites at and near the Qena-Qoşêr Road and for the sites in the desert near Armant, maps 1:500,000 for the other sites.



The sites are numbered in the sequence of their discovery. Sites discovered by the expedition of spring 1936 are included in the scheme. They are attached, e.g. as 12A, 12B, 12C, &c., to site 12 of the Sir Robert Mond Expedition.

Two different types of people frequent and frequented the desert: those who dwell in the desert, e.g. the bedouin of to-day, and those who dwell in the Nile valley or on the coast or in the oases or outside Egypt; these people only travel across the desert. Drawings of the first type of people are found all over the desert, especially in wadis rich in vegetation and therefore good pastures or hunting-grounds. Drawings of the second type are found along the roads.

In the Eastern Desert these roads lead from the Nile valley to the Sinai Peninsula—the bridge between Africa and Asia—to the coast, and to the mines in the mountains. One main road in the explored area runs from Quft (or Qûş or Qena) to Qoşêr, another main road runs from Quft (or Qûş or Qena) in a south-easterly direction to the mines, and the port of Berenice in Ptolemaic and Roman, and of 'Aidhab in medieval times.

In the Western Desert the roads are by-paths more or less parallel to the river, or roads leading from the Nile valley to the oases and farther on into the Sahara and the Sudan. One main road crosses the bend of the Nile between Armant and Nag'al-Ḥamâdi. And in the last part of the explored area the Wâdi Sab'er-Rigâl, an ancient main road from somewhere in the desert, reaches the Nile.

Sites along the roads contain records of both desert dwellers and travellers. Sites far from the roads contain records of the desert dwellers. Sometimes an unexpected series of sites with travellers' inscriptions proves the existence of a road which fell later into disuse.

In the final publication a full inventory of each site will be given; in this report I give only the main features.

Site 1. Huge shady rocks, called Guşûr el-Banât. Early: boats and animals.—Inscriptions of Graeco-Roman times, including Himyaritic and Nabataean.—Modern bedouin tribal marks (*wusûm*).

Site 1A. Cliffs in the Darb el-'Abûdi, a road coming from the north-west and joining the Qena-Qoşêr Road. Signs, including pentagram, swastika, and Greek letters. They belong probably to the Blemians and are tribal marks, as will be explained later.

Site 2. Qena-Qoşêr Road. Shelters in the slope of the hill, north of the road. Early: elephants, wild asses, barbary sheep, and other animals; men; boats. Later: hieroglyphic inscriptions.—Later: Blemian signs.—Recent: camels, Arabic inscriptions and *wusûm*.

Sites 3 and 4. Cliffs and shelters south of the road, opposite 2. Elephants, giraffe, boats, men.—Hieroglyphic and hieratic inscriptions, drawing of Min.—Blemian signs.—Modern *wusûm*. Site 4 contains the only rock-painting discovered in the Eastern Desert: man (dark red), archer (light red), ibex, and another animal (brown). The painting is very roughly done and without any artistic sense. Date uncertain.

Site 5. Mouth of Wâdi Abu Kuê'. Walls with good afternoon shadow. Predynastic boats.—Hieroglyphic inscriptions and accompanying pictures.—Blemian signs. The multitude of boats and the care applied is remarkable.

Site 6. Huge rocks, shelters, and walls along the south side of the Qena-Qoşêr Road. The place is called *Abu Kuê'*. Elephant, wild asses, antelope, ibexes, barbary sheep, hippopotamus, boats, men dancing.—Hieroglyphic inscriptions and accompanying drawings, representations of Min and Taurt.—Aramaic inscriptions, Greek, Himyaritic, and Nabataean inscriptions,

Blemian signs.—Modern *wusûm*. The place was a favourite resting-place of travellers going to the quarries or the coast.

Site 7. Wâdi Abu Kuê'. Boulders and overhanging shelters. Elephant and other animals, men, some human beings with upraised arms.—Dynastic drawing of a man smelling a lotus-flower.—Blemian signs.—Modern *wusûm*.

Site 8. Qena-Qoşêr Road, northern side. Hills around an ancient hydreuma, called *ukâle Abu Kuê'*. Asses, cattle, men with bow, with lasso, human being with upraised arms, boats.—Hieroglyphic inscriptions, one accompanied by a drawing of an archer. Uraeus.—Greek, Thamudic, and Latin inscriptions, Blemian signs.

Site 8A. Beginning of Wâdi Muwêh, cliffs on its western side. Archer shooting an elephant. Human being surrounded by game.

Sites 8B and 8C. Same wadi, western side. Geometrical compositions, gerenuk-gazelle(?), boats, men.—Blemian signs.

Site 8D. Same wadi, western side. Modern drawings of a boat and people with guns.

Site 9. Qena-Qoşêr Road, south side. Human being, probably female, with upraised arms, staff in right hand, surrounded by animals.

Site 10. Same road, north side. Low line of cliffs, leading to a hill called Qêf el-'Igûl. Good afternoon shadow. Still a favourite resting-place. Hunting scene: archer, leopard or other cat, ass, gazelle, ostrich, giraffe, boat. The neck of the giraffe is cut by two strokes. Boats.—Hieroglyphs.—Shrine with traces of Greek inscription, Min, many Blemian signs.

Site 11. Small hill south of the road. Blemian signs.

Site 12. Wâdi 'Aṭwani. This wadi consists of two main branches, the longer one leading straight from north to south, the shorter coming from the north-east. Joined, they run south-west and reach the Qena-Qoşêr Road. Site 12 is at the beginning of the north-east branch near the junction. Elephants, ibex, and archers. Asses, antelope, dogs. Near the wall with the elephants are small boulders with traces of hammering and whetting.—Some flint implements on the surface.

Sites 12A-C. Northern branch of Wâdi 'Aṭwani. Boats, archers.—Arab drawings of camels, game, riders on camel- and horseback.

Site 12D. Hill north of a conspicuous pair of hills, called *en-Nuhûd*. Nabataean inscription.

Site 12E. Hill called *Hugâb Selîm*. Modern *wusûm*.

Site 12F. Wâdi Am el-Uşûm. Vertical shady walls. Favourite modern resting-place. Plenty of modern *wusûm* and drawings, camels, boat, jug. Some Arab names.

Site 12G. On a ridge between the Wâdi Ḥamâma and the Wâdi Serâi. On boulders some signs of indefinite character.—Near-by ruins of settlement and many potsherds, probably Roman.

Site 12H. Ancient basin in the Wâdi Serâi, called *es-Sihriq*. On the inner wall of this, modern *wusûm*.

Site 13. North-east branch of Wâdi 'Aṭwani, near site 12. Shelter with shadow all day. Elephants, giraffe, asses, dancing women, boats.—Greek inscription.—Modern *wusûm* and some drawings.—Near-by some disturbed tombs. Flint implements near the shelter. The place seems to have been visited especially in the days of elephants. In later times it was seldom frequented.

Site 14. Same wadi. At a height of about 8 m., wall facing south. Crocodiles, footprints of



animals, 'nets'. At the bottom of the wadi, boat and man. On boulders near-by, ibexes, ass, bird. No flints at the bottom of the wadi, but some on the top of the hill. Absence of later drawings.

Site 15, close to site 14. Walls facing north. About 8 m. high, natural cave 9 m. deep. No remains in the cave. On the walls of the hill, elephants, giraffes, asses, ibexes, ostriches, cattle, boats, men.—Arab *wusûm* and drawings.

Site 16. Same wadi. For a length of some kilometres, drawings on both sides. Elephants, hippopotamus, asses, ibexes, and other horned game; dogs. Men, some with bows. Human being surrounded by animals, holding in one hand a bow, and in the other a snake-like object. Boats.—Some Greek letters.—Arab *wusûm* and drawings, two men fighting beside a naked woman.

Site 17. Same wadi, walls facing south-east. Elephants, ibexes, ostriches, crocodiles, foot-prints of animals, 'nets', spirals and wavy lines, men. All drawings of highest antiquity.

Site 18. Wâdi Gash. Piled boulders forming a natural cave on the west side of a wadi coming from the north-west, nearly at its junction with the Wâdi Gash. An ancient road follows this wadi as well as the Wâdi Gash. The place is situated half-way between the wells of Lagêta and the Bîr Gash. This position and the splendid shelter it affords explain why this site is extremely rich in drawings from earliest to modern times. Elephants, giraffes, hippopotami, antelopes, ibexes, barbary sheep, cattle, crocodiles, birds; dog. Boats, some towed by men. Men with bows, staves, lassoes, people with upraised arms. Bukrania.—Early Horus names, a few probably very early hieroglyphs. Man (Pharaoh?) clubbing captive, Min.—Greek inscription, Christian symbols (fish, &c.). Blemyan signs, and connected with them camels, cattle, lion, sailing-boats, camel-riders.—Arab inscription, *wusûm*, camels, naked woman, boat.

Judging from the drawings, this place had its main importance in predynastic and proto-dynastic times. The best wall inside the cave is so full of drawings that it is difficult to isolate in this mass the exact outlines of each picture.—On the surface, only a few insignificant flints and late potsherds.

Site 18A. Rocks on the western side of the Wâdi Hilâni, south-east of el-Buwêb. Good shelters. Elephants, asses, ibexes, ostriches, sailing-boat.—Hieroglyphic inscriptions. Horus-falcon, Min.—Many Greek inscriptions. Blemyan signs.—Arabic inscriptions, one Cufic carefully carved.

The place had its main importance in Graeco-Roman times. It was a resting-place of traders and miners travelling to Berenice or to the mines. Many Roman potsherds on the surface.

Site 18B. Farther on in the Wâdi Hilâni, same side. Small cave at a height of about 4 m. Blemyan signs.

Site 19. North-west of site 18. Cliffs. Min.—Boat, Blemyan signs.

Site 20. East of site 18 in the Wâdi Gash. Drawings here and there on both sides of the wadi. Mostly Blemyan signs.

Site 21. Farther east in Wâdi Gash, near the meeting of two desert roads. Cave-like shelter north of the main road, cliffs with afternoon shadow, south of the road. Rocky islet in the midst of the wadi north of the cave-like shelter. Boats.—Greek names, cow with curious head-dress and Blemyan signs on the cliffs.

The cave-like shelter is unique. Man in Phrygian cap fighting a lion with sword and shield, man in Phrygian cap on horseback in the attitude of St. George, two men in Phrygian caps

fighting each other with sword and shield. Min carved by the same artist. Every drawing is accompanied by the word  $\Phi\omega\nu\iota\varsigma$ .

Site 22. Wâdi Zeidûn. South side, near the junction of the Rôd el-Maghalat. Man with spear and shield, cow and calf.

Site 23. Wâdi Zeidûn. West of site 22, south side of the wadi. Early man with bow, ass.—Blemyan signs.

Site 23A. Near site 23, in the angle of Wâdi Menîh, west side. Cliffs and shelters. Mass of Blemyan signs.

Site 24. Wâdi Menîh. Rock in the middle of the wadi. Blemyan signs.

Site 24A. Wâdi Menîh. Single small boulder in the middle of the wadi. Horse, *wusûm*.

Site 24B. Wâdi Menîh. West side, opposite the entrance to the Wâdi Menîh el-Hêr. Cave-like shelter. Full shadow all day. Ancient roads follow the Wâdi Menîh as well as the Wâdi Menîh el-Hêr. Favourite resting-place. Giraffe, asses, ibexes. Boats. In one boat stands a woman with upraised arms. Men, archer, dancers.—Hieroglyphic inscriptions, boat, Min.—Greek, Latin, Himyaritic, and Nabataean inscriptions, sailing-boat, cattle, Blemyan signs.—Some flints and late potsherds on the surface.

Site 24C. Wâdi Menîh. West side. Shelter with Blemyan signs.

Site 24D. Wâdi Menîh. The wadi bends to the east. At the north-east corner of the bend, Arab drawings of fighting men.

Site 24E. Same wadi, north side. Shelter with fighting men and Blemyan signs.

Site 24F. Same wadi, south side. Walls. Giraffes.—Men on horseback, Blemyan signs.

Site 24G. Same wadi, south side. Walls with Blemyan signs.

Site 24H. Same wadi. Farther east the wadi becomes wider till it reaches the high schist ridge. This wide open part in front of the higher mountains is bordered by sandstone cliffs. Here and there good shelters are formed by piled boulders. The place is rich in vegetation; a permanent well, the Bîr Menîh, is near-by in the schist clefts. These conditions made the place attractive to hunters and cattle-breeders.

Elephants, giraffes, geometrical designs, ibexes, lion, ostriches; cattle, dog. Men hunting with bow or lasso, woman, child, woman during childbirth. Boats.—Greek inscriptions. Blemyan signs; connected with them camels, cattle, men with bows and broad-tipped arrows.—Arab *wusûm*, camels, rider on horse- or camel-back, fighting men.—Disturbed tombs and possibly walls of ancient camps.

Site 24I. Schist rocks at and close to the Bîr Menîh. Hieroglyphic inscriptions.—Himyaritic inscription.—Ancient settlement on the hills near the well. Potsherds.

Site 24K. Mountain path between the Bîr Menîh and the Wâdi Menîh el-Hêr. Arab inscription and *wusûm*.

Site 24L. Wâdi Menîh el-Hêr. Cliffs and shelters. Giraffe, asses, boat.—Ibexes, camels, monogram-like sign.

Site 24M. Wâdi Menîh el-Hêr. Blemyan signs.

Site 24N. Wâdi Menîh el-Hêr. Two huge boulders near the southern border of the wadi; rocks and shelter at this border. Enormous number of Blemyan signs. Some Greek, Nabataean, and Arabic inscriptions. Camels, asses, ibexes, and, apparently of the same recent date, elephant and man. No drawings earlier than Graeco-Roman, few of later date.

Site 24. Wâdi Agabawiye, eastern side, opposite the mouth of Wâdi Meneihi. Islet of



sandstone on igneous rock. Walls and shelters. Cattle, ibexes, ostrich; dogs. Boat. Archers, one with an unusually large bow. In front of a wall facing north was probably an atelier: few flints, much quartz worked into triangular arrowheads. Some potsherds. Many ancient paths. Near-by, disturbed walls of settlement.

Site 25A. Another island of sandstone, north of site 25. Giraffes, elephant, hippopotami, asses, ibexes, antelopes, ostriches, lizard; cattle, dogs. Men with bows, man, woman, and children. Boats. Oval and spiral rows of holes, probably gaming-boards.—Blemyan signs.—Arabs on horseback.—Potsherds, traces of settlement.

Site 25B. Islet of sandstone south of 25. Ibexes, gazelle, ostriches; cattle, dogs. Boats. Men with bows, with staves, women in skirts.—Drawing of dynastic time: man smelling a lotus-flower.—Arabs on horseback, fighting.

Site 25C. Bir Daghabag. Schist walls. Ibexes, cattle, dog.—Hieroglyphic inscription, man with staves.—Greek inscription.—Arab *wusûm*, man with gun.—Traces of settlement.

Site 26. Wâdi Abu Wâsil. Large wadi running east to west with good vegetation, bordered with sandstone cliffs, walls, and shelters. Like site 24H it is near the edge where the sandstone touches the igneous mountains. It seems that this situation produced here and there well-watered fertile valleys, so that it attracted early men.

Geometrical designs.—Elephants, giraffe, asses, ibexes, ostriches, crocodile; cattle, dogs. Boats, some towed. Men with bows, man with club, men with lassoes, dancers. Ancient signs.—Blemyan signs, camels.—Arab *wusûm*, camels, fighting men.—Some potsherds, implements of flint and quartz. Tombs?

Site 27. Wâdi Abu Wâsil. After bend running south to north. Shelters and boulders on the western side. Geometrical designs. Elephants, crocodiles.—Asses, ibexes, antelope, ostriches; cattle, dogs. Men with bows, man with lasso, women in skirts. Ancient signs. Spiral formed by a row of holes, probably gaming-board as in site 25A.—Early Arabic inscriptions, *wusûm*, men on horseback, crocodiles.

Site 28. Wâdi Abu Wâsil, south of site 27. Shelters and boulders on the west side. Giraffes, crocodiles, footprint of an animal.—Asses, ibexes, gazelle; cattle, dog. Boats. Men with bows, with arrows, dancers. Ancient signs. Dish-like hollows on surface of rocks.—Hieroglyphic inscriptions.—Blemyan signs.—Arabs on horseback and camel-back, giraffes.—Implements of quartz, ferruginous sandstone, flint, a few late potsherds.

Site 29. Western Desert. Near Armant. Top of deep incised wadi in the slope of the limestone plateau. Ancient Coptic monastery. Giraffes.—Coptic inscriptions, partly painted in red colour. Birds, crocodile, scorpion, boats, women, crosses, pentagrams, palm-branches.—Ruins of buildings, potsherds.

Site 30. On the main road crossing the desert between Armant and Nag'al-Ḥamâdi. This road is called *Darb el-Ba'irât*. At the northern border of the plateau the road leads down a steep pass to a branch of the Wâdi el-Ḥôl. Like the other wadis in this limestone plateau it is steeply washed out, and its borders form more or less vertical walls with many shady corners and shelters. The difficult pass can be climbed only by day, so it is natural that many travellers passed the night in this wadi from prehistoric times to the present day, as their drawings and inscriptions prove. It is noteworthy that in dynastic times this spot must have had a particular importance. Rarely has such a mass of hieroglyphic inscriptions been found at one site, and not only the usual graffiti, but even a carefully worked stela.

Elephants, giraffes, hippopotamus, antelopes, ibexes, barbary sheep, cattle, dog, uncertain bird. Geometrical designs. Men.—Hieroglyphic and hieratic inscriptions. Antelope, gazelle, stag, hare, lion, horse, dog, crocodile, fish. Sailing-boats. Men with flower, with staff, with mace. Pharaoh on throne, women. Mentu, Anubis. Man and ox painted in red colour.—Greek and Coptic inscriptions.—Arab *wusûm*.—Mounds of potsherds, especially near the stela. In the Wâdi el-Ḥôl near-by, on crest of hill, disturbed tombs in natural caves, potsherds.

Site 31. Mouth of Wâdi el-Ḥôl, eastern side. Narrow cleft. Excellent resting-place, cool and shady. Elephants, giraffes, barbary sheep, wolf-like animal, dog, crocodile. Geometrical designs. Men, some dancing.—Near the site many flints; probably an atelier.

Site 32. Southern border of the plateau, near Armant. At top of short wadi, Coptic monastery. Coptic inscriptions and frescoes.—Potsherds.

Site 33. Southern border of the plateau, near top of Wâdi el-Ḥêba, eastern side. Cattle.

Site 34. Southern border of the plateau, top of short wadi. Ancient monastery, but already frequented in earlier times. Giraffes.—Elephant, antelope, cattle, ass, fox, dog, crocodile or lizard. Men, some with staff, with throwing-stick, with lasso. Boats.—Horus names, hieroglyphic, hieratic, demotic inscriptions. Man with cattle. Boat.—Coptic inscriptions, Christian symbols, traces of frescoes.—Ruins of the monastery, potsherds.

Site 35. Environs of Ḥôsh. Sandstone rocks along the river. Not thoroughly surveyed. Elephant, giraffe, antelope, ibex, dog, lizard. Footprints of animals. Geometrical designs. Traps? Men.—Giraffe, elephant, rhinoceros, ibex, gazelle, ostrich, uncertain bird. Archers, one with broad-tipped arrow. Boats, some towed.—Hieroglyphic and hieratic inscriptions. Lion. Man with cattle, man adoring the falcon.—Greek inscriptions. Human face. Masons' marks.—Disturbed tomb on top of hill.

Site 36. South of Ḥôsh, Wâdi Sab'er-Rigâl, famous for its Mentuhotep reliefs. Not thoroughly surveyed. The wadi is particularly rich in hieroglyphic inscriptions. Noteworthy in this connexion are ancient stone walls jutting into the river at its mouth. Uncertain bird.—Man with antelope.—Hieroglyphic inscriptions. Pharaoh on throne.

Site 37. Near Armant. Wâdi Rizêgât, eastern side. Two cave-like shelters in limestone cleft. These caves are partly closed on the open side by walls of rubble masonry. At the front and inside these shelters, some drawings. Elephants, giraffe, ibex, barbary sheep, cattle (?), ass, bird.

Site 38. Eastern Desert. Wâdi Abu Wâsil, southern side. Sandstone walls and shelters. Elephant, ass, ibex, cattle, ostrich; dog. Man with bow, with staff, with lasso. Boats.—Hieroglyphic inscriptions.—Greek inscriptions. Blemyan signs, altar, ibex, rider on camel-back.—Arab *wusûm*, camels, ibex, ostrich, rider on camel- and horse-back, fighting men.

Site 39. Small wadi leading south of site 38, west side. Ibex, ostrich. Men. Boat.

Site 40. Western Desert, near Armant. Wâdi Abu Maḍâwi, eastern side. Shelters in short side-wadi. Giraffe, antelope, gazelle, cattle, bird, geometrical designs.—Horus name. Boat.



## THE COLLECTED MATERIAL

THE material collected from the rocks covers an enormous space of time, from modern to early prehistoric days. The obvious and natural method of treating this mass of records is to begin with the recent and datable, and to discover gradually the dating of the earlier drawings. Every inscription is dated in itself: it can only belong to a certain period. Therefore the material is classified under three headings: I. Inscriptions; II. Signs; III. Pictures.

### I. INSCRIPTIONS

1. Arabic. It may be noted that modern European travellers have left their names here and there on the rocks, sometimes badly damaging valuable ancient drawings. As a matter of course their inscriptions have not been collected. Also recent Arabic inscriptions—infrequent and no more than names—are of no interest. Earlier Arabic inscriptions, especially dated ones, have been collected. They are few in number and probably inscribed by pious pilgrims who came along the road leading from Qûs to 'Aidhab, the usual pilgrim's road in medieval times.

2. Nabataean. The unexpected presence of Nabataean inscriptions in the Upper Egyptian desert was already known. They occur comparatively often, always along the trade routes between the Nile valley and the Red Sea. They prove that already in pre-Islamic times Arabs frequented the Egyptian desert: caravan leaders and traders, forerunners of the conquerors.

3. Thamudic. Only at one site on the Qena-Qoşêr Road.

4. Aramaic. Rare, all together at site 6 on the Qena-Qoşêr Road.

5. Himyaritic. Along both trade roads to the coast.

6. Latin. A few inscriptions of Roman soldiers along the same roads (e.g. 24 B. M 318 quater, Pl. VIII. 2). The roads were controlled by Roman military posts.

7. Greek. These are common, especially along the main roads in the Eastern Desert (e.g. 24 B. M 318 quater, Pl. VIII. 2).

8. Coptic. Common in the ancient monasteries in the small wadis of the Western Desert, not far from the Nile valley. Elsewhere very rare.

9. Demotic, 10. Hieratic, 11. Hieroglyphic. Common along the roads. Important is the XIIIth Dynasty stela on the road between Armant and Nag' al-Hamâdi (30. M 342, Pl. X. 1) and the occurrence of early Horus names at various sites. These have been found in the Eastern Desert at site 18 (18. M 170a, Pl. XI. 1). Another engraving, which might be a Horus name (it lacks the falcon), occurs at site 5 on the Qena-Qoşêr Road (5. M 45, Pl. XI. 5). In the Western Desert two different Horus names have been collected, at site 34 (34. M 407a, Pl. XI. 2, and 34. M 423, Pl. XI. 3, both the same name) and site 40 (40. M 521a, Pl. XI. 4).

12. Inscriptions in unknown characters. Very few (e.g. 30. M 365a, Pl. IX. 2).

### II. SIGNS

An irregular scrawl traced by an idle hand on paper, or a scrawl in the sand traced by the wind which sent a branch whirling there, will pass unnoticed. But if the idle hand traces a cross or a triangle, a square or a circle, or if we look at a sliced honeycomb or the fairy rings

in a meadow, our eye is struck by the regularity of the form. Its mathematical abstractness and limitation, in the midst of the many irregular phenomena which surround us, catch our eye, as a tune, mathematically harmonious, strikes and charms our ear in the midst of irregular unnoticed sounds. A regular drawing does not pass unnoticed: it occupies the mind of the beholder, it excites him to interpret it, to see in a circle the sun, a fruit, or an open mouth, in a triangle the tooth of a shark, in a cross a man with outstretched arms. So these signs, which are simple to make and yet attract the attention, are apt to acquire a particular meaning, acknowledged by all the members of a primitive community; in other words, they may become symbols. They may be used as conveyors of magic powers or to deliver a message or to mark one's property. Many hundred different signs have been collected from the sites in the desert: most of them have a long and unknown history; one quite modern one tells how such a sign could and can be an ideogram. It consists of a circle with a vertical stroke on top of it. This sign means a *dilu*, a leather bucket with its rope. The sign is found at places where somebody dug and found water. It is a message to a later comer that water may be found there, if he digs for it. Many of the signs on the rocks in the desert are tribal marks of modern bedouin. Each one has its name, and this name may sometimes date from very early times and reveal the original meaning of the sign.

The many signs found on the rocks can be arranged in three groups: 1. Signs of the Arab period; 2. of the Graeco-Roman-Coptic period; 3. earlier signs.

#### 1. SIGNS OF THE ARAB PERIOD

They have been found scattered over nearly all sites in both the Eastern and the Western Deserts. Some of them are actually in use among the bedouin of to-day. Every tribe has its particular sign, *wasm*, pl. *wusûm*. Sometimes sub-tribes distinguish one another by slight differentiations of the ancestral sign. They brand their camels with them. After good rainfall the bedouin brings the camels to green wadis, and there the animals pasture, often left quite alone for months. The brand on the camels proves to which tribe each one belongs. If a bedouin meets some camels pasturing in the desert, he always looks to see whom they belong to, and he is pleased if he finds his tribe's *wasm* on the animals. This sign he has in his mind; it is connected with his wealth, with marriage gifts, with tribal pride. So it is quite natural that he draws his sign here and there on the rocks, in most cases only as a pastime which recalls some cherished ideas, sometimes traced on the ground near the path as a message for bedouin who come after, to tell them that he, a man of such and such a tribe, has already passed that way. Occasionally the direction in which he went off is indicated by a stroke.

The collection of these tribal marks is important because they are found everywhere where Arab bedouin came. They are recorded from Arabia itself, from Syria, Palestine, the Egyptian deserts, from northern Africa, the Sahara, and the Sudan. On the rocks they are sometimes connected with Arabic inscriptions. In Arabia and its borderlands they occur even together with Safaitic, Thamudic, and Nabataean inscriptions, proving that particular signs have been in use since pre-Islamic times and are probably of higher antiquity. A comparison between the distribution of the *wusûm* in actual use all over the Arab world and the rock-inscribed *wusûm* collected from Arabia and the surrounding countries will tell us the ways of migration of the different Arab tribes, will show the single streams composing this flood which



overwhelmed a world, and will help our understanding of some historical, ethnological, and philological (dialectical) problems.

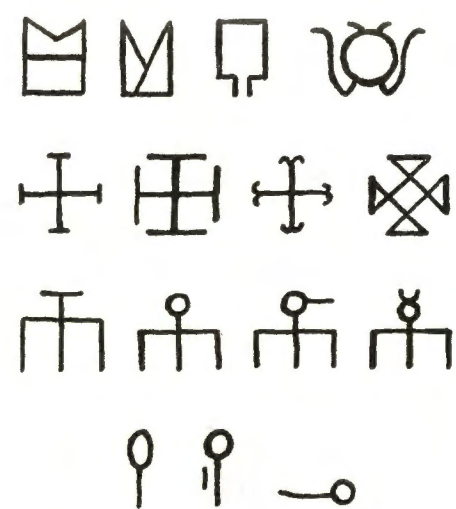
The tribal marks of the Arabs are mostly of simple forms, e.g. two strokes set at an angle like the Greek letter lambda, with a third stroke in the middle like the footprint of a crow, a forked stroke, an open square like the Greek letter pi, a circle, a circle with a cross in it or on it, &c. Sometimes they occur in connexion with Arab inscriptions or with camel drawings or fighting scenes doubtless of Arab origin.

They are hammered out with a pebble or a sharp stone, or simply scratched on a smooth surface; sometimes they are incised, and then somewhat more carefully done than usual.

Together with modern Arab *wusûm* are found those of the 'Abâbde, bedouin of Hamitic stock, in the Eastern Desert. They are as simple in form and as roughly done as those of the Arabs.

## 2. SIGNS OF THE GRAECO-ROMAN-COPTIC PERIOD

The observer in the desert will note an obvious difference amongst the signs. The Arab *wusûm* he distinguishes quickly from the others. He knows some of them from their use among



modern bedouin; he accustoms his eye to their simple forms and to their simple variations, so he eliminates them from the main mass. In this mass he notices a great number of signs of a certain style. Their originators had a peculiar sense for heraldry; the signs are beautiful, with a strong feeling for harmonious balance, they are generally more complicated than those of the Arabs, and their variation is rich. Most of them are hammered or deeply scratched out, rarely incised; often they are cleanly worked. Sometimes signs of this style are intermingled with Greek letters, sometimes accompanied by Greek names. Amongst them occurs, on the one hand, the drawing of an altar, an offering-table, and probably the sun-disk with uraei; on the other hand, the cross is not rare in forms which recall Coptic ornamentations. This group of

signs has therefore to be ascribed to a period when Greek letters were still in use, a period in whose beginning Egyptian symbols and in whose end Christian symbols were available to the draughtsmen. (See some specimens here above.)

The distribution of these signs covers the whole of the Eastern Desert as far as it has been explored. They have been recorded from other parts east of the Nile as far as the Nubian Desert. They are found along the roads, but, equally, far from them in fertile wadis.

Sometimes they occur in the rock-drawings on the hind quarters of camels, more often between the legs of camels or cattle, or, once, of an ass. Generally they appear without any drawings of animals, sometimes in masses together.

We must conclude that these signs are of Graeco-Roman and Coptic times.

The spreading of the signs over all the Eastern Desert in retired wadis proves that the owners of these signs must have been desert-dwellers. But they are also scattered along the roads, particularly at shady resting-places. This shows that these people came regularly along the roads.

The great number of the signs proves that their owners must at least have been of some considerable numerical importance.

The differentiation of single signs in complicated families, the taste shown in selecting the form of a sign, and the care often applied to their drawing proves that tribal and subtribal self-consciousness was developed.

The connexion of the signs with animals proves that they were used as brands.

The animals branded show that the wealth of these men was camels and cattle.

Who were these people?

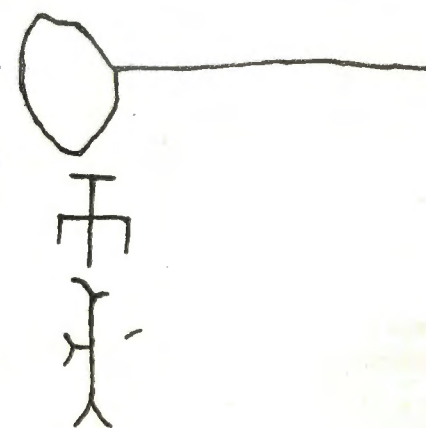
In the third century A.D. an Eastern Desert people appear in the historic records of Upper Egypt. They obtain more and more power, become masters of the desert roads, make raids in the Nile valley, and fight the Roman troops. The historical traditions call these desert people Blemians. The power of the Blemians lasts till the sixth century. They have an aristocracy, and they have priests who take an interest in Greek culture and language.

No doubt the owners of these signs in the desert are the Blemians. Desert archaeology here fits in excellently with written historic tradition. But, further, we know that the Blemians of the historians used heraldic signs. A document of a Blemian king is signed by his name and the names of two witnesses. The notary wrote the names of these three people and each of them put after his name his sign.<sup>1</sup>

Two other groups beside these tribal marks of the Blemians appear in the Graeco-Roman-Coptic period. Both groups are limited to a small number, and to particular places: Coptic symbols, and masons' marks.

Coptic signs were found almost exclusively in the monasteries: crosses in many variations, painted and incised, sometimes so tiny that they recall an illuminated manuscript.

Masons' marks were found in the quarries near Hôsh. Size and skill in execution distinguish them. They were made by craftsmen who knew how to cut accurate lines in stone with metal implements.



## 3. EARLIER SIGNS

A few earlier signs occur, some of uncertain early date, some connected with prehistoric drawings.

## III. PICTURES

The first impression made by the pictures found on the rocks is that of an amazingly variegated mass. The next thing the observer notices is the difference in patination: one picture looks as fresh as if carved yesterday, another has faded and has become the same colour as the stone itself, and between these extremes are many degrees of patination. The next thing which strikes the eye is the difference in the technique applied. Some drawings are superficially scratched, others roughly and coarsely hammered out, others cleanly and carefully incised,

<sup>1</sup> J. Krall, *Beiträge zur Geschichte der Blemier und Nubier*, Denkschriften der Kais. Akademie der Wissenschaften in Wien, Phil.-hist. Kl. 46 (1900), Nr. 4.



others hammered out with the skill of an artist who is obviously accustomed to work with stone on stone, others are hammered or scratched out and then smoothed, and others are painted.

To put into order this multitude of pictures the following methods are applied:

#### A. Direct

a. A drawing is dated by an accompanying inscription or a datable sign, e.g. a well-known tribal mark of modern bedouin.

b. It is generally dated by the fauna represented, or other things connected with a certain period, e.g. a camel is recent, an elephant ancient, a man with a gun must be modern, a boat with a standard, as on the red decorated pottery, must be ancient.

c. A drawing can be dated by its style, if this style is already known, e.g. the style of Dynastic Egypt.

d. By superimposition and a particular kind of juxtaposition. It is evident that a drawing superimposed on another one must be younger than the underlying one—whether by an hour or by centuries we must discover by other means. Sometimes the following rule can be observed. A wall is ornamented with drawings of different types. The first comer had used the best parts: the smoothest and nearest to his hand. The later comer could either put his own drawings on top of the former ones or he could place them alongside. Hence a second rule emerges: the drawings beside the better places of an inscribed wall are the later. But the rule can rarely be applied.

e. A drawing can be dated by its patination. The means is evident if the surface bearing the drawings is even and exposed in the same degree to weathering. If under these conditions one drawing has a light, another a dark patination, the darker must be the older, e.g. 8. M 69, Pl. X. 2. But very often a slight unevenness in the surface, a higher or lower position on a wall, a protuberance in the rock, changes the circumstances. Then drawings from the hand of the same artist may appear quite differently weathered. (See below, p. 33 sq.). Unevenness may cause one part to be better preserved than another. Drawings situated lower on the rock may be more exposed to erosion by sand than those higher up.

f. In some cases it is evident that the level of a wadi or strips at the borders of the wadi have been lowered in course of human time. Consequently the drawings of the earliest artist are now unusually high on the wall, sometimes so high that they cannot be reached. In these particular circumstances the distribution of the drawings on a wall shows a stratification in chronological sequence: the nearer the bottom the younger.

#### B. Indirect

A careful observation of the mass of the pictures shows that among the undated drawings different groups exist, e.g. the representation of human beings is done in a particular style. And people in such a particular style have particular dress, weapons, boats, &c., which clearly distinguish them from people in other styles, in other dress, with other weapons and other boats, &c. After defining the characteristics of such groups it is possible to obtain their chronological sequence by applying the enumerated direct methods *b, d, e, f*.

#### C. Surface-finds

In the field stone implements, potsherds, and other remains have sometimes been collected at the sites of rock-drawings. If only one kind of drawing is represented at a site, and only

one type of surface-finds has been collected there, e.g. a special type of flint implements, an already formed dating of the rock-drawing may be supported by this surface-find.

#### I. ARAB PERIOD

The group is dated by Arabic inscriptions and well-known *wusûm* here and there accompanying the pictures; further, by the common representation of camels; further, by the fact that weathering is nearly always very slight: most of the drawings have no or only a clear patination.

The applied technique is rough hammering out or scratching with stone; rarely, more careful incision with a metal implement.

The style generally lacks any aesthetic feeling. The draughtsman sees the parts of a camel: a body plus four legs plus a long neck with a head plus a hump plus a tail. These parts he shows in his drawings, forming them as far as possible of straight strokes, and putting them so squarely together that the picture looks more like a cheap wooden toy than a living camel. And as he draws animals, so he draws men.

**Fauna.** The following animals are represented: ibex (very common), antelope, gazelle, giraffe (twice only), ass, ostrich, crocodile (once only); dog, camel, horse. Camels and horses are saddled and ridden.

**Weapons.** Lance of the rider, sword, shield. The shield is more or less circular. Noteworthy is a shield drawn as a very small circle with a pendant stroke (16. M 112, Pl. I. 2).

**Social Life.** Tribal distinction is proved by the *wusûm*. Fighting scenes and drawings of men brandishing sword and shield are fairly common, and tell us that war played an important role in the minds of these Arab draughtsmen. Twice in one wadi occurs the picture of two naked men fighting beside a naked woman with upraised arms and dishevelled hair—probably the record of a duel (16. M 112, Pl. I. 2).

#### 2. GRAECO-ROMAN-COPTIC PERIOD

##### A. The Blemians

The group is dated by accompanying Greek inscriptions and Blemian signs. The weathering is slight.

The technique is hammering out. Finer specimens of the drawings are hammered out, and then the lines have been cleaned by striking along them with an incising instrument. The implement used in every case is probably a stone.

The style is not definite. Coarser drawings are sometimes not to be distinguished from Arab drawings, and only the presence of Blemian signs induces us to ascribe them to this people. But some of these coarse Blemian drawings are clearly distinguished from the Arab ones. The Blemian draughtsman has in such a case not seen a camel as the sum of different parts—body plus legs plus neck and so on—but he has seen the camel as an entity. He draws this entity with one line following in gentle curves the outlines of a camel's silhouette (e.g. 24 H. 81a, Pl. II. 1). If a camel drawn by an Arab looks like a toy of wood, this camel drawn by a Blemian looks like a toy of plastic wax or mud. This Blemian feeling for plasticity is sometimes also expressed in their particular way of drawing human or animal legs. These are then not a simple stroke, but a stroke from foot to knee and then above the knee growing thicker



and thicker (e.g. 18. M 157, Pl. III. 1). Finally, some few of the Blemyan drawings are clearly Hellenistic in style.

**Fauna.** Ibex, lion (18. M 156, Pl. III. 2); dog, cattle, ass, camel, horse. Horse and camel ridden (e.g. 18. M 157, Pl. III. 1).

**Dress.** Men wear a shirt-like garment reaching to the knees (24 H. 81a, Pl. II. 1). In most cases the waist is marked, sometimes it is even the main feature: the body is eight-shaped (e.g. 26. M 230, Pl. II. 2). It may be that these people wore a girdle round their waist, hence this eight-shaped appearance. One particular group of drawings shows men wearing what are probably trousers, and a head-dress recalling the Phrygian cap (21. M 186a, 187, 188a, Pls. V. 1, 2, VI. 1).

**Weapons.** Bow and (once) broad-tipped arrow (24 H. 81a, Pl. II. 1), rider's lance (18. M 157, Pl. III. 1, and 21. M 187, Pl. V. 2), sword and oblong shield (20. M 183, Pl. III. 4; 21. M 186a, Pl. V. 1; M 188a, Pl. VI. 1).

**Shipping.** Ships are uncommon among Blemyan drawings. But site 18 is a splendid shelter at the junction of two wadis and two roads. Prehistoric people have filled the walls there with drawings of their boats. Blemyans also liked this shady place, as their signs prove. They saw these strange ancient boats and this incited them to draw such boats as they themselves knew: vessels with a mast and triangular, rarely quadrangular, sail, and oars (18. M 159, Pl. III. 3).

**Social Life.** Sword and shield in the hands of Blemyans show that they were warlike people. The study of their signs has already proved that their tribal self-consciousness must have been developed; further, that they used those signs as property-marks on their animals, and, finally, that their wealth was cattle and camels. The custom of signing an animal with a mark is by no means obvious. Most of the animals kept by men all over the world are not marked, and do not need to be marked. But if any animal needs to bear a mark, it is the camel, because for long months it is pasturing in the wadis out of the sight of its owner. Among the Arabs the use of such property-marks is attested since pre-Islamic times. The few earlier signs found in the Egyptian desert are never connected with any animal, and must have had quite a different meaning. But in Blemyan times we observe in the rock-drawings property-marks applied to animals, and we see much more: an enormous development and spread of this heraldry. Another fact is to be observed and emphasized: in Blemyan times the camel appears for the first time in the desert drawings, and it appears not sporadically, but as the favourite animal of these desert-dwellers. We conclude therefore: (1) Camel-owners have branded their animals since an early date. (2) The Blemyans dwelt in a country exceedingly suitable for camel-breeding. They introduced this animal into their country. The multitude of camel-marks—as well as the camel-drawings—proves that the importation was completely successful; by the camel these people became wealthy. This favourable change of the basis of material life explains the sudden rise of the hitherto nearly unknown Blemyans in the third century A.D., to a power menacing Roman Egypt.

**Religion.** The Blemyan signs prove, as we have seen, that symbols of Egyptian paganism and Christianity were in use. We cannot conclude, from the presence of those symbols in the corpus of their signs, how far the religious ideas of the Blemyans were Egyptian and later on Christian. But at one site seven Egyptian altars are drawn much larger than the signs (38. M 503, Pl. IV. 3; 38. M 510, Pl. IV. 2). Here this altar seems to be an important feature

of the cult. Twice occurs a sign like an inverted T augmented by two accompanying strokes beside such an altar. And this inverted T is the link between these altars and a unique group of drawings in the cave-like shelter at site 21. This group consists of fine pictures of a man fighting a lion (21. M 186a, Pl. V. 1), two men fighting each other (21. M 188a, Pl. VI. 1), a man on horseback with a long lance in the attitude of St. George, the god Min (21. M 187, Pl. V. 2), and a camel. All these men are shown full face, wearing the Phrygian cap. My first impression was that they were Mithraic representations. The lion-fighter, the duel, the rider, and Min are accompanied by the word  $\Phi\omega\pi\iota\varsigma$ , and by the inverted T, once augmented—slightly differently—by two smaller strokes. This enigmatic group proves at present only one thing: that the god Min, god of the desert roads through the millennia of dynastic Egypt, was respected by the Blemyans. Not far from this shelter is another curious drawing: a cow or an ox drawn full face with an unexplained ornament on its head (21. M 191, Pl. VI. 2), possibly a cult-object.

#### B. Pictures of the Graeco-Roman-Coptic Period of Uncertain Authorship

The Blemyans were the desert-dwellers in this period. They left their records in the rocks all over the Eastern Desert, and the sum of these signs and pictures gives a comparatively rich ethnological description of this people.

But numerous people who dwelt elsewhere, in the Nile valley, in the towns on the coast, in the Western Oases, or outside Egypt, travelled across the desert. And they, too, left here and there pictures at the resting-places along the roads they travelled. The material is scanty, and it is difficult to ascribe it to any particular author. These pictures do not belong to the type which we know as Blemyan, but they display more or less the Hellenistic style, and so we ascribe them to the period.

There is, for example, a dwarf carrying buckets (10. M 79, Pl. VII. 2), a sailing-vessel (24 B. M 317, Pl. VIII. 1), a full-faced portrait done by a quarry worker (35. M 433, Pl. VII. 1), or a crocodile with a falcon's head (18. M 146a, Pl. VII. 3).

#### C. Coptic Pictures

Nearly all of them are found in the ancient monasteries, and they show what these old monks had in their mind: crosses, elaborately ornamented, priests' vestments (34. M 409, Pl. I. 3), palm branches, a peacock, pigeons, a raven, crocodiles, boats, and dancing girls.

#### 3. DYNASTIC PERIOD

The records in the rocks of the Graeco-Roman-Coptic period divide neatly into two main groups: records of the desert-dwellers and those of desert-visitors. For the much longer period of dynastic Egypt we cannot yet make such a distinction. We can only determine as belonging to this period a mass of pictures accompanied by hieroglyphic inscriptions or done in the unmistakable style of dynastic times. In other words, we can isolate only the records of the desert-visitors. These men came to the desert for various reasons: hunting, quarrying, and mining, trade to the coast or the oases, or simply to shorten a road here and there, going straight on across the desert instead of following the bends of the Nile valley.

The final study of the pictures and the accompanying texts will enable us to distinguish



different epochs in this mass of drawings. Here only a brief description of the dynastic pictures as a whole is given.

The following animals are represented: gazelle, stag, ibex, antelope, cattle, hare, lion, crocodile, fish; dog, horse. There are men with bow and arrow, with lasso, with staff, with flower, man smelling lotus-flower, man in adoring attitude, Pharaoh on throne, Pharaoh with mace; women; sailing-vessels; Min, Mentu, Taurt, Anubis, Horus the falcon, uraeus.

#### 4. UNDATABLE EARLY, PRE-DYNASTIC, AND PREHISTORIC PICTURES IN THE EASTERN DESERT

Hitherto we have had at our disposal the surest means of dating a picture: accompanying inscriptions. A good deal of the whole material collected could be set apart and ascribed to one of the historic periods: Arab, Graeco-Roman-Coptic, or Dynastic. But the majority of the pictures cannot be attributed to any of these periods, and most of them are apparently older. It will be possible to discover in this remainder the following: two definite groups belonging to peoples who are foreigners in the Eastern Desert of Upper Egypt, one definite group which is separated by a gap of time from all the others, and a fourth group, less definite. With this last group we begin.

##### A. *Autochthonous Mountain-dwellers*

It is difficult to find a name for this group. To-day there live in the Eastern Desert 'Abâbde and Bishārîn. It is highly probable that these peoples are the direct offspring or at least related to the dwellers in this desert in medieval times, who are called Bega by the Arab writers. In Graeco-Roman-Coptic time the Blemyans dwelt here. It is again quite reasonable to believe that the Bega are the offspring or related to the Blemyans.<sup>1</sup> Who, then, were the forefathers of the Blemyans? The Arab writer Maqrîzî says that the Bega owned camels and long-horned cattle. The rock-drawings show that the Blemyans already had camels and cattle. A number of earlier rock-drawings show people in the Eastern Desert who possess cattle. These cattle-owners are in all probability the ancestors of the Blemyans. Their records go far back. So we may be entitled to call these people autochthonous. They have resided here from very remote times till the present day. Cattle-breeders are found in early times here in the Eastern Desert as well as far away in the Western Desert. That they bred and hunted cattle proves that desiccation was not then so advanced as it is to-day. The term 'desert-dwellers' is therefore to be avoided, and I have called them Mountain-dwellers, because in the mountains are the valleys which at all times would have better vegetation than the plains. There they lived and there they left their records. The language of the Bishārîn is a Hamitic idiom. The 'Abâbde speak Arabic, but the Hamitic substructure of their former language is visible even to-day. On the western side the Berbers, offspring of the Libyans, speak Hamitic languages. So it is further reasonable to suppose that these cattle-breeding early people—forefathers of the 'Abâbde and Bishārîn, Bega, Blemyans in the east, Berber and Libyans in the west—spoke a Hamitic language. Therefore we may call the whole group Hamites.

Very early representations of these cattle-breeders show a certain similarity in style and culture in both deserts, Eastern and Western (VVb., pp. 20, 33). In drawings which are probably

<sup>1</sup> There is some chance that a future collection of tribal marks among the Bishārîn and related tribes and a comparison between them and those of the Blemyans may establish a pedigree.

later, a differentiation in style and dress appears, to such a degree that it is sometimes doubtful if we are entitled to ascribe a drawing to this Hamitic group. This differentiation might be explained by the fact that in early times these Hamitic cattle-breeders were not separated by the Nile and its valley. They crossed the river on rafts or boats, and this intercommunication preserved a homogeneity of culture. But in dynastic times the eastern and western halves of the Hamitic Mountain-dwellers were separated by the police of a strong, well-organized state. Then local differentiations could more easily develop in the mountains.

Here one particular observation must be inserted. The amount of drawings put on the rocks in different epochs can be compared. The result of such a comparison in the Eastern Desert is surprising: in Arab times—a millennium and a quarter—few pictures have been drawn. In Blemyan times—three to five centuries—at least as much was drawn as during the whole Arab period. Of the period between the Blemyans and those men who drew elephants and giraffes, only a few pictures are found on the rocks. In early times—indicated as early by the fauna—an enormous quantity of rock-drawings was produced. The reasons for this strange fluctuation are various: economic and ethnic.

The appearance of the camel in Blemyan times meant an economic revolution. It resulted in an increase of a vigorous population: hence this multitude of records in the desert. Advantageous economic circumstances likewise characterized a period some thousand years before, when enough rain fell on the mountains to produce a vegetation sufficient for giraffes and elephants, as well as for cattle and plenty of other animals. It resulted in an increase of the human species which then lived by hunting this big game. Hence, again, a multitude of records on the rocks. Another reason is half economic, half ethnic. If we were to produce rock-drawings, we should use an old knife and scratch some poor, stiff pictures of camels or motor-cars on the rocks. And if the knife were quickly broken, we might continue with a sharp stone, and our drawings would look as miserable as those of the Arabs. The pleasure of producing them is small, and to look at them is no pleasure at all. But a hand which is accustomed to work with stone implements and to work on stone—as it is through making the implements—will not be tired like ours and the Arab's, by hammering out a picture on a rock surface. This hand, accustomed to the stone implement, will produce with skill the drawing which is in the mind of the draughtsman, and will find the hard material no obstacle. So we conclude that Arab drawings are small in number not only because the people were comparatively few, but also because these people were accustomed to metal implements. And consequently we can conclude that the Blemyans must have been at least to some extent users of stone implements—we remember the broad-tipped arrow-head, more probably flint than metal. And finally we understand why, in the earliest times when stone was the most usual material for implements, many fine pictures were hammered out of the rock. The third reason is ethnic. There are races who are by nature fond of drawings and clever at producing them, and other races without this talent. The fourth reason is again ethnic. For many tribes certain drawings are of magical or religious importance, therefore they produce them often and with care.

The time between the Blemyans and the ancient period of elephant and giraffe is not well illustrated by rock-drawings. We will therefore investigate first this early period and then try to find links with later times.

The material I collected during former expeditions, particularly in the spring of 1936, made a classification and a relative dating of the early rock-drawings already possible. Five groups



were distinguishable: (1) People who drew boats with standards ('Standarten-Leute'). They are the same people who originated in the Nile valley the Nagâda II (Gerzean) civilization. (2) People with a particular wig-like style of hairdressing, recalling somewhat the mop *dirwa* of modern 'Abâbde and Bishârîn ('Dirwa-Leute'). They probably belong to the originators of the Nagâda I (Amratian) civilization in the Nile valley. No more pictures belonging to them have been found. (3) People characterized by the custom of wearing one or two feathers vertically on their head ('Federschmuck-Leute'). They are connected in the drawings with a foreign type of boat with tall, vertical prow and stern. They came from the Red Sea. (4) People wearing the Libyan sheath, *Penistasche* ('Penistaschen-Leute'). They bred cattle in the mountains. (5) People drawing the human body in a wedge-shaped way ('Keilstil-Leute'). They are the forefathers of the people characterized by the Libyan sheath. From these five groups belong together: the people wearing the Libyan sheath, the people with the wedge-style, and probably the people wearing the *dirwa*. The reasons for this division are explained in *Völker und Völkerbewegungen*. The results of the expedition of 1936-7 have strengthened my former conclusions. The process of putting in order these early drawings will be repeated here from the very beginning, and we have now to deal with a much richer collection.

First we shall describe which groups are to be distinguished in this now augmented material by the culture and style represented by each, and then we shall try to define their chronological position.

There are many rock-drawings showing men wearing a curious garment: the *Penistasche* or Libyan sheath. The second name indicates that it is a peculiarity of the Libyans, as we know from dynastic Egyptian monuments. As a matter of course a rock-drawing gives just the outlines of a man or an animal and hardly ever any detail. So we cannot prove beyond doubt that the represented garment is a real *Penistasche*; but it is highly probable. And the fact remains that these people are distinguished from others by this peculiarity, which is or looks like the well-known Libyan sheath.

People with this Libyan sheath appear in the rock-drawings in the Eastern Desert.

**Fauna.** They were here acquainted with the giraffe. The animal does not occur very often in their drawings. They knew the elephant, as we conclude from contemporary drawings done by other people (see below: 'Eastern Invaders'); but they themselves drew the elephant very rarely. Only one example has as yet been found which was probably drawn by them. They hunted the wild ass, ibex, antelope, gazelle, wild cattle, and ostrich. They kept a greyhound for hunting purposes. Among all the animal representations those of long-horned cattle dominate, and evidently not wild, but domesticated. That this cattle was domesticated is proved by: (1) artificial deformation of the horns, (2) by care applied to the representation of the udder, indicating that the draughtsman appreciated the milk. The udder is drawn at its natural place, not, as elsewhere, between the hind legs. Some drawings show cattle with one, two, or three little strokes hanging down from the neck, probably amulets. Generally cattle-pictures excel in the care applied to them. This means that this animal was particularly important. The dappling of cattle is occasionally drawn in. Sometimes men are shown catching a bull or cow by lassoing its horns. Once people are hunting cattle with bow and arrow; this is proof that there existed also wild cattle.

**Dress.** So much for the fauna. The representation of men is, as has been said, characterized by the Libyan sheath. Sometimes this garment is connected with a short kilt. Occa-

sionally two things like a Libyan sheath appear, one on the right and one on the left side (25. M 207, Pl. XIX. 1), possibly a garment quite different but worn by the same people. Sometimes no clothing at all is shown. Women are seldom drawn; no new pictures have been found in the last season. Women drawn in wedge-style wear short skirts reaching below the knees. The coiffure of the men is rarely indicated. Certainly the head was not shaved. Sometimes a vague mop of hair can be seen, once like a mushroom-head. One important drawing (28. M 278a, Pl. XVIII. 2) shows a man with the well-known Libyan lock.

**Weapons.** Their weapon was the bow. In most cases it is remarkably long. More important is its shape as illustrated in the finer drawings: it is not a single curve somewhat like the letter C, but a double curve like the number 3 (26. M 240, Pl. XVIII. 1, and 28. M 278a, Pl. XVIII. 2). We conclude that it was a carefully made and effective weapon. Quivers were not in use. One picture shows a man holding a bunch of arrows in his hand (28. M 278a, Pl. XVIII. 2). A man shooting at an ostrich seems to use a broad-tipped arrow, but the drawing is unfortunately not clear (M 212). Some men hold sticks in their hands, bent in various shapes.

**Hunting.** Bow and sticks were mainly hunting implements, no fighting being recorded in the rock-pictures. Another specific hunting implement was probably the spiked wheel-trap, which is known in this area among the Bishârîn and 'Abâbde of to-day. The idea is to attach a loop round the foot of the game. The trap consists of three essential parts: (1) A string attached to a peg or tree or stone at one end, with a loop at the other. (2) A plate supporting the large open loop. (3) A collar-like ring to support this plate. String and loop need no explanation. The plate is constructed as follows. It is a ring made of the fibre of the *sayâl*-acacia. To this ring are attached pointed sticks of *marh*-wood like the spokes of a wheel. The points meet in the centre. So many sticks are used that they form a closed surface: the plate. This surface is obviously elastic. If an animal puts its foot on it, it slides to the centre and sinks in, if there is any hollow below the plate. To create this necessary hollow is the function of the third part: the collar-like ring, which is made of the bark of *sayâl*. The trap is used in the following way. In places where game is expected, particularly near trees, the hunter excavates a hollow and puts the collar into it. Then he puts the plate on the collar, then the loop on the plate. As already described, the other end of the string is firmly attached somewhere near-by. Then the hunter covers the trap and the string well with sand and goes off. The animal, for instance a gazelle, comes to feed from the tree, and walks round and round till it puts one of its feet on the spot where the trap is hidden. The foot slides to the middle and sinks in. The pointed sticks frighten and hurt the animal; it tries to run off. By this hasty movement it pulls the loop tight round its leg. It may be that it flings the plate off, but the loop is fastened. Then the hunter comes and kills the animal. Now in many rock-drawings of this Libyan sheath people an animal, ass, ibex, gazelle, antelope, or ostrich, is shown with one foot attached by a string to a peg (26. M 240, Pl. XVIII. 1, and 28. M 278a, Pl. XVIII. 2). Sometimes the hunter is also in the scene shooting an arrow at the animal. The nearest explanation is that the device by which the game has been caught was this spiked wheel-trap, already known in Egypt in the wall-painting of Hierakonpolis. One single rock-picture shows below a trapped animal an unexplained drawing which might be a trap (14. M 95, Pl. XIX. 2). If it is really a trap, and if this trap is the same by which the animal above it has been caught, we are wrong in our suggestion that the spiked wheel-trap was in use among these Libyan sheath-wearing people. This unexplained trap uses perhaps the principle that the loop is supported



by a kind of plate above a hollow, but it seems to depend on a principle of tension by a bow, which is foreign to the spiked wheel-trap.

**Shipping.** Shipping was of no importance to these men. Only once (possibly twice) they appear associated with a sickle-shaped boat. It is noteworthy that animals who like water are lacking in their drawings. There are no crocodiles and hippopotami; instead of them appears a typical steppe and mountain fauna: cattle, antelopes, &c., ostriches. This strengthens our reason for calling these Libyan sheath-wearing people Mountain-dwellers.

**Social Life.** About their social life we have learnt already that they got their livelihood from cattle-breeding and hunting, and we have noted the absence of fighting scenes. The Libyan sheath has probably nothing to do with social feelings like shame. The garment is found elsewhere in the world and is better explained as a practical protection against thorns and other inconveniences. Remarkable is the representation of a woman standing during childbirth (*VVb.*, fig. 46 = 24 H. M 302, 303).

**Religion.** In the religion of these men cattle played a role. One drawing shows a cow (or bull, the sex is not indicated) wearing a disk between the horns (*VVb.*, fig. 47 = 24 H. M 296), another a cow (with well-drawn udder) with ring-like deformed horns (*VVb.*, fig. 46 = 24 H. M 302). Above it is the woman during childbirth, beside it are other cows and an archer. All these drawings are on a black-patinated wall high on the hill. The effect of the clear, fine drawings on a dark background in this dominating position is splendid. It is probable that the place and all the representations had some religious meaning.

I have classed together in this report the people characterized by the Libyan sheath and those characterized by the wedge-shaped representation of the human body. Very few new examples of the wedge-shaped drawings have been found. And both types are similar in their equipment. The wedge-shaped people are an older style of representation of the same Libyan sheath-wearing people. That they are earlier is proved by superimposition (*VVb.*, fig. 49).

It is already possible to say what is the typical style common to all early Hamitic draughtsmen in the explored area. I may call it a sense for the plasticity of bodies. The artist sees that the shoulders of a man are greatly rounded, sees the tail of the waist, sees the buttocks. Sometimes he also draws the legs as they are, gradually diminishing in thickness to the feet. He sees the articulation of the limbs, elbows, and knees at their right places and draws them. For the animals he has the same or even more artistic feeling. So his drawings are not stiff, but lively; occasionally movements of bodies are well observed and drawn. It will be remembered that in Blemyan drawings—in a lesser degree—this sense for plasticity can be seen, and that we consider the Blemyans the offspring of these earlier cattle-breeders.

The technique used by the Libyan sheath people is skilful hammering out. One particular small group of animal drawings I am inclined to ascribe to these men. These animals—ibexes, antelopes, gerenuk-gazelle (?), elephant, greyhound, cow with amulet—are incised.

In this same Eastern Desert occur some other pictures which we ascribe to Hamitic Mountain-dwellers, but they do not wear the Libyan sheath. There is one single picture (10. M 81b, Pl. XIX. 3) of a hunter in a spirited jumping attitude. He wears a short shirt and probably the Libyan lock. His weapon is the 3-shaped bow. With him are drawn an ass, a gazelle, an ostrich, a lion, a giraffe (? the neck is rather short), a dog, and a sickle-shaped boat. The giraffe is of particular interest. Two incised strokes cross the neck, and a long line running down from this wound may be blood. The whole picture is hammered out, except the two

strokes. It seems that these have been done with the hunter's knife, perhaps for a magical purpose.

Another unique picture (24 H. M 308 bis a, Pl. XVII. 2) shows a man with a pointed spear. The point looks like metal-work. Unusual is the representation of the two eyes. The man is so badly drawn that we learn nothing about his dress; possibly he has a shield in his left hand. The same artist drew beside him with much care three bulls. Occasionally this difference of interest in the representation of man and animals can be observed, the animal being more important to the artist than the man. These three bulls are indeed interesting: two are dappled and one is plain; each one has his horns deformed in a different way and each wears an amulet hanging round his neck. The feet are very curious: the artist drew not the side view of the foot as one would expect, but the print of the foot in the sand. We conclude that the cattle were domesticated, but that they pastured freely in the wadis. Hence the interest in footprints, the footprints being important as a guide to the owner.

The picture is hammered out.

Another unique picture in the Eastern Desert (4. M 43, Pl. XVII. 1) shows a cow with her calf beneath her. The cow has an amulet at her neck, her hide is ornamented with geometrical designs. Perhaps these triangles are intended for nothing more than the dappling; otherwise we must suppose a very strange cut or branded decoration. In front of the cow is a man in a garment recalling that of the Blemyans, an unexplained triangular object hanging down from this garment at the knee. He holds in his left hand a round shield, in his raised right hand a spear. Behind the cow is his adversary, a man shooting a sharp-pointed arrow from his 3-shaped bow. One arrow is drawn already nearing the spearman; the latter protects himself with his shield. Above this scene are two more people shooting arrows at each other. Some arrows are flying through the air. They are very sharp-pointed, suggesting again metal-work. On the left above this scene is a man on horseback riding in a saddle, holding the bridle in one hand, and with the other swinging something, perhaps a whip. He follows a cattle-like animal. The difference between it—especially in the horns—and the cow with calf is noticeable. Far below the rider is a sign. This sign is not one of the well-known Blemyan tribal marks.

The whole picture is hammered out.

To summarize: Hamitic cattle-breeders lived in the Eastern Desert as well as deep in the Western. The earliest style is characterized by the wedge-shaped representation of human bodies. The men in this period wore kilt and Libyan sheath. Few examples of this style occur in the Eastern Desert, many in the far Western Desert ('Uwenât and elsewhere). In the Eastern Desert a later style forsakes the extreme wedge-shaped form; human beings are more natural in appearance. The men wear the Libyan sheath. There are many examples of this type. These artists lived in the Eastern Desert in the time of the elephant and giraffe. The singular picture in the same area of a hunter wearing a short shirt may show an ancient individual or tribal differentiation. Most of the drawings of the Libyan sheath people show neither giraffe nor elephant. It is therefore probable that they continued to live in the same dress in the mountains after the giraffe and elephant had left Egypt.

Two different pictures show cattle-breeders with probably metal-pointed weapons; one of them also shows a rider on horseback.

We have called these Hamites Autochthonous Mountain-dwellers, because we find them in these mountains for several thousand years. But later on we shall see that there are records



on the rocks from a time when these Hamites were not yet in the mountains. In those days another people lived here (see below, 'Earliest Hunters'), quite distinct from the Hamites. We conclude therefore that the Hamites immigrated from elsewhere at a very early date into the steppes and mountains bordering the Nile. And we may add another observation of no less importance: since their earliest appearance the Hamitic Mountain-dwellers were connected with cattle. No cattle is found in the rock-drawings of pre-Hamitic times. Hamites and cattle immigrated together.

In the early period, indicated as early by the presence of elephant and giraffe, the Hamitic cattle-breeders had for some time to share their country with two foreign peoples. One of them we know well from the excavations of predynastic sites in the Nile valley. The other was almost unknown to us, but not unexpected. These people were Eastern Invaders.

### B. *Early Nile-valley Dwellers*

During the expedition of the spring of 1936 some few boat-pictures had been discovered which displayed a great similarity to paintings found on predynastic decorated pots. Last season's work has brought richer evidence. A number of particular boat-drawings has been collected, and, associated with them, representations of men and animals. The boats are the main link which joins this group of rock-drawings with the Nile valley. The frequency of these Nile vessels in pictures in the desert far from the river proves that the draughtsmen came from the Nile. We therefore call them Nile-valley dwellers. At least some types of the boats in this group of rock-drawings are the same which occur on the predynastic pots. But this wave of intrusion into the Eastern Desert, which came from the Nile in the predynastic period, lasted till early dynastic times. So we call the group Early Nile-valley dwellers.

**Fauna.** According to the rock-drawings the following animals were known to the Early Nile-valley dwellers: giraffe, elephant (both rare, 18. M 140, Pl. XIV. 1), hippopotamus (18. M 141a, Pl. XIV. 1, 2), ibex, antelope (18. M 154a, Pl. XV. 2), barbary sheep (18. M 140, Pl. XIV. 1), wild cattle (18. M 147a, Pl. XV. 1), ass, leopard or other felid (18. M 154a, Pl. XV. 2), ostrich and uncertain bird (18. M 140, Pl. XIV. 1), crocodile (18. M 141a, Pl. XIV. 2), dog (18. M 154a, Pl. XV. 2).

**Dress.** Representations of human beings are frequent; in most cases no dress at all is indicated. Sometimes men wear small (occasionally long) feathers on their head, one (18. M 154a, Pl. XV. 2, and M 172a, Pl. XII. 2), two (18. M 172a, Pl. XII. 2), three or five (18. M 147a, Pl. XV. 1). Once a man wears a high cap (18. M 137a, Pl. XIII. 3). Another singular picture shows a man with a bifurcated cap and a crook-like object on his girdle, which, if part of the garment, may be a kind of Libyan sheath (18. M 151a, Pl. XIII. 2). Once a man with upraised arms is drawn with something hanging down from each upper arm (18. M 154a, Pl. XV. 2). It is probably a part of the dress, and, if so, it is very important, as will be seen later.

**Weapons and Hunting.** Weapons are rarely seen in the hands of the men. One drawing shows a man hunting an ostrich with his dog. The man has a C-shaped bow; some arrows have already pierced the bird. It is probable, but not certain, that the drawing has been done by one of these Nile-valley dwellers. In another drawing of these people we see two hippopotami. From these animals start lines which end in the hands of surrounding men (18. M 141a, Pl. XIV. 2). The scene must be explained as a hippo-hunt with harpoons. In a few other

pictures men hunt cattle by throwing a lasso round the horns (18. M 147a, Pl. XV. 1). Once a man holds a crook in his hand (18. M 151a, Pl. XIII. 2), another an unexplained whip-like object (18. M 172a, Pl. XII. 2, compare 18. M 137a, Pl. XIII. 3). One picture probably belonging to this group shows a man with a stick and oblong shield.

**Shipping.** The striking feature in the rock-pictures of this people is the multitude of boat-representations. Ships were important to them. Three different types occur: sickle-shaped boats, incurved sickle-shaped boats, and incurved square boats. On the peculiarities of each type see the Appendix below. A fourth type (square-boat derivation F) seems to be a form in use amongst these people in early dynastic times.

**Social Life.** Twice copulation is shown. One of these drawings suggests that the intention of the draughtsman was humorous (18. M 172a, Pl. XII. 2). The boats are big and complicated and with many oars. We conclude that social collaboration must have been more developed than among the Mountain-dwellers, so far as the rock-drawings give evidence. But we know the comparatively high standard of life in the Nile valley in predynastic times and its rise under the early dynasties. The rock-drawings in the desert are the unexpected reflection of this life.

**Religion.** Site 18 is a cave formed by piled rocks, situated at the junction of two large wadis. Along these wadis run two ancient roads. The spot must have been of some singular significance to these Nile-valley dwellers. The main wall inside the cave is full of boat-drawings, so many that it is not possible to make out the outlines of each single one of them. Now, it could hardly be an aesthetic pleasure to draw a boat on a surface already overfilled with boat-pictures. The artistic effect on such a background is negligible. Therefore it was not artistic impulse which induced the man to draw a boat—and specifically a boat—on this particular wall. We must look for another reason. Some of these boats are accompanied by persons holding their arms upraised in a special gesture. People in this gesture are well known and frequent on the decorated pots, and there again they stand often in or beside boats. The gesture has been explained as a pose of dancing or of mourning. At sites 5 and 7 people with raised arms appear, but with no boat near-by. There one human being stands in this pose beside an ibex, and behind the ibex is a dog. And in site 18 is also a scene of animals and near them two human beings with upraised arms (18. M 154a, Pl. XV. 2). This must mean that people in this gesture are here associated with hunting. We have to abandon the explanation that the gesture is a dancing pose. It is a gesture of prayer. The people are praying for luck in hunting, and they are praying for something else in the boats. We know from dynastic Egyptian monuments the role of the boat in the ritual of the dead. It is therefore not going too far to explain these boats in the rocks of the desert as connected with a ritual of the dead. The persons standing with upraised arms in or near the boats are praying for the dead. And if we are right in our suggestion, we can understand why these people should have been interested in filling this cave wall in such an abnormal measure with boat-drawings: the place had some religious importance. A boat inscribed on this wall was probably a kind of memorial or magic help. I tried to discover any traces of tombs near this site, but I found nothing. Noteworthy and possibly of a religious meaning are bukrania (18. M 137a, Pl. XIII. 3) at the same site, probably done by these Early Nile-valley dwellers. The place continued to be important till early dynastic times. We find some archaic-looking hieroglyphs (18. M 147a, Pl. XV. 1) and early Horus names, one probably of Narmer (18. M 170a, Pl. XI. 1). The drawing of a man clubbing his enemy is also found (18. M 169a, Pl. X. 3). Of later dynastic times hardly any inscriptions or drawings exist at this



site—the place had lost its fame—so it is probable that the man with the club belongs to this early period. The explanation that all these boats are connected with the ritual of the dead is strongly fortified by a drawing of a being, who may be a deity, standing between towed boats and an associated hippo-hunt (18. M 141a, Pl. XIV. 2). The hecatomb?

Many of the boats show details which we cannot explain as part of the ship's gear. It is probable that some were magical accessories. On one boat a little animal hangs down at the incurved stern (24 B. M 316a, Pl. XXXVI. 39). It is possibly the hide of a sacrificed animal.

The style is well distinguished from that of the Hamitic Mountain-dwellers. It lacks generally the interest in plastic forms. Human beings look stiff, the head is drawn big and circular. It is an abstract expression of man, not the realistic one typical of the Mountain-dwellers. Nevertheless, some finer drawings, particularly of animals, prove that these people knew how to observe and to draw. But it seems that these artists were under the influence of a school—the same school which influenced the pot-decorators.

The technique is mostly hammering out. Sometimes, if only the outlines of a body are drawn without filling it up, these outlines are cleaned by incising them with a sharp implement. And some few pictures are incised.

To summarize. From predynastic to early dynastic times, Nile-valley dwellers frequented the Eastern Desert. The absence of fighting-scenes, the scarcity of hunting-scenes, and the regularity of boat-pictures, raise the question whether religious reasons induced these people to visit the desert.

### C. Eastern Invaders

The main result of the expedition in the spring of 1936 was the discovery of rock-drawings showing boats of a type foreign to Egypt. It is the same foreign type which appears occasionally in the Nile valley in late predynastic and early dynastic times. This type of boat with tall vertical prow and stern is, among other evidence, proof of a Mesopotamian influence in Egypt. The Sir Robert Mond Expedition of 1936–7 has now produced much richer material. The rock-drawings of these boats, the accompanying representations of men and animals, and the distribution of these pictures all over the Eastern Desert give a comparatively detailed account of the culture, strength, and ways of migration of these foreigners, whom we have called Eastern Invaders.

**Fauna.** The following animals appear in their rock-drawings: elephant, hippopotamus, giraffe, ibex, antelope, barbary sheep, stag (?), wild cattle, wild ass, lion (?), ostrich, lizard; dog (26. M 213a, Pl. XXIII. 3; 26. M 222a, Pl. XXIII. 1). The dog is rather short-legged and short-necked. Once a dog is shown on a lead. Occasionally the greyhound occurs in drawings of these invaders. Many of the wild asses drawn by these men have an unexplained straight or curved stroke issuing from the back of the head (8. M 69, Pl. X. 2; 26. M 222a, Pl. XXIII. 1).

**Dress.** About the dress of men and women we are well informed by the rock-drawings. Characteristic for the men is the frequent ornamentation of the head with one (26. M 213a, Pl. XXIII. 3; 26. M 222a, Pl. XXIII. 1; 27. M 266b, Pl. XXIV. 1; 28. M 288a, Pl. XXIV. 3) or two (26. M 219, Pl. XXII. 1; 26. M 237a, Pl. XXII. 2) long feathers. Once a man wears seven, another one four short feathers. Perhaps these two people do not belong to the Eastern Invaders.

Most of the representations of men show no dress. The exceptions are therefore the more

interesting. Two people wear a kind of kilt recalling a type of dress worn by the Hamitic Mountain-dwellers (27. M 266b, Pl. XXIV. 1). In another picture we see perhaps the same garment composed of four parts, and in the same drawing a man with two strings hanging down instead of the kilt (26. M 219, Pl. XXII. 1, compare 26. M 237a, bottom right, Pl. XXII. 2). The same man wears a kind of girdle rather high up round his waist. Some pictures suggest that the men wore an animal's tail hanging down at the back (VVb., p. 11), and drawings of men in side view make this dress fairly certain (26. M 213a, Pl. XXIII. 3, compare VVb., fig. 23). One of these men has an unexplained loop at the place of his private parts (26. M 213a, Pl. XXIII. 3). The same is found in three other pictures (26. M 219, Pl. XXII. 1, left hand; 26. M 231a, Pl. XXV. 1; 26. M 237a, Pl. XXII. 2, top). Extraordinary are long garments reaching below the knees with a strange protuberance at the lower border (26. M 237a, Pl. XXII. 2). Another picture shows a man with zigzag lines on his body, which may represent a kind of wrapping (26. M 231a, Pl. XXV. 1).

Women wear a long skirt reaching to the feet (13. M 90, Pl. XXIV. 2 = VVb., fig. 26; 27. M 266b, Pl. XXIV. 1). Two pictures of women show no garment at all (VVb., figs. 21, 23). A particular style of hairdressing seems to be intended in the drawing of the wrapped man (26. M 231a, Pl. XXV. 1). If this is really so, we must note the surprising resemblance between this coiffure and that of modern 'Abâbde and Bishârîn. Elsewhere not the slightest trace of hairdressing can be found in the drawings of these invader people. At any rate we can conclude from the feathers they wore on their heads that they did not shave them entirely.

**Weapons.** The weapon *par excellence* is the bow. It is a smaller one than that used by the Mountain-dwellers and of distinctly different C-shaped form (26. M 213a, Pl. XXIII. 3; 26. M 219, Pl. XXII. 1; 26. M 222a, Pl. XXIII. 1; 26. M 237a, Pl. XXII. 2). Another weapon occurring only once is a pear-shaped mace (26. M 219, Pl. XXII. 1).

**Hunting.** Bow and mace were used for hunting. These men caught wild cattle by lassoing them around the horns. They knew the same trap so common among the Mountain-dwellers, which we suppose to be a kind of spiked wheel-trap. But drawings of animals caught by it are very rare.

**Shipping.** Shipping was according to the rock-drawings no less important to the invaders than it was to the Early Nile-valley dwellers.

As I have just said, the form of these boats is foreign to Egypt. The hull is straight; prow and stern are bent upwards in a rectangle. The multitude of boat-pictures enables one to distinguish different developments of this 'square boat' type. Of particular importance is the fact that one of these derived forms is in use among the Early Nile-valley dwellers (the 'incurved square boat'), suggesting an intercommunication between the two peoples. See Appendix.

**Social Life.** Once copulation is represented (VVb., fig. 24). Twice we find pictures of families (VVb., figs. 21, 23). In one of them (VVb., fig. 21) the woman links her arm in that of the man. This points to an equality of position between the sexes. Hunting-scenes are common; hunting was the support of life of these men. The frequency of ships in the pictures makes it probable that the communication with countries along and beyond the Red Sea lasted for some time. Perhaps there was a continual infiltration of new-comers from overseas into these hunting-grounds. Many boats show the crew in them indicated by small strokes, showing that these boats were big enough to transport a considerable number of men. To create them, organized collaboration was required. Among the crew in these boats stands—



often much taller in proportion—the captain. In some cases he holds an unexplained boomerang-like object in his hand (26. M 214, Pl. XXXVII. 53; 26. M 220, Pl. XXXVIII. 58; 26. M 237a, Pl. XXII. 2), perhaps a wand of office. The long coats of the men in the particularly well-executed drawing 26. M 237a (Pl. XXII. 2) may also be a sign of social distinction.

Both sexes were fond of dancing (*VVb.*, figs. 11, 18, 19, 20, 25, 27, 28, 26 = 13. M 90, Pl. XXIV. 2; 26. M 222a, Pl. XXIII. 1; 27. M 266b, Pl. XXIV. 1). Of interest is one picture showing a man with two women on each side of him. The man holds a curious bent object in his right hand, possibly a kind of rattle or other musical instrument (27. M 266b, Pl. XXIV. 1). The same instrument occurs in the hand of other dancers (28. M 288a, Pl. XXIV. 3).

**Religion.** During the expedition of the spring of 1936 a picture of a human being standing between game was found, which seemed to be the representation of a mythical idea of a Master or Mistress of the Animals (*VVb.*, fig. 30). At least one picture more has been found which again expresses such an idea. The 'Master' holds in one hand a bow, in the other a snake-like thing. Below his feet start symmetrically four animals, two at the right and two at the left (16. M 117b, Pl. XXV. 2). Another drawing which may belong to the same type represents a more female-looking being, staff in hand, surrounded by animals (9. M 76, Pl. XXV. 3). Another religious idea is possibly expressed in the picture of a stylized tree and two dancers beside it (*VVb.*, fig. 27). Once two people wear what are possibly masks (*VVb.*, fig. 22); if this explanation is right a religious intention is probable. Finally we have to ask whether the boat-drawings may not have had a religious meaning. Some of the boats show clearly that these men knew how to handle boats, to launch them (*VVb.*, fig. 32), to tow them, and to spread an awning over them (*VVb.*, fig. 36). They were doubtless acquainted with shipping—were sailors. But just because shipping in this world was important to them, it is quite possible that they expected shipping also in the other world. Some of the boat-pictures may then have a religious meaning.

The pictures of men and animals recall the style of the Early Nile-valley dwellers. There is the same lack of interest in the true representation of a body, its plastic form, and its articulated limbs—that interest which distinguished the drawings of the Hamitic Mountain-dwellers. The pictures of these invaders are more or less abstract records of that which makes a man: head, trunk, limbs, dress, but the harmonious and beautiful entity is not conceived. In spite of this, the invader draughtsman is able to sketch good movements, for instance, of a dancing group. Curious is the occasional heavy treatment of the shoulder-upper-arm part of a human body.

All their pictures are hammered out.

To summarize. In the time of elephant and giraffe there appears in the Eastern Desert a people who came from the Red Sea. Their pictures show connexions with the Mountain-dwellers (use of the same game-trap, kilt), and with the Nile-valley dwellers (intermediate forms of boats).

#### D. Earliest Hunters

I had suspected some spirals and other intertwined lines discovered in the spring of 1936 of being earlier in date than any other rock-drawings. The full discovery of this earliest period was the chief result of the Sir Robert Mond Expedition of 1936–7. The authors of these earliest pictures appear in them as hunters of elephant and giraffe. We therefore call the group Earliest Hunters.

**Fauna.** The elephant—occurring, but more or less rarely in the three cultures already

described—is common in the pictures of these hunters. Sometimes the feet of the animal are shown as circular disks, obviously a representation of the footprints attached to the side-view picture of the animal (12. M 82a, Pl. XXVII. 3). The giraffe—likewise rare in the other cultures—is here also common. Both big animals played the first role in the mind of these draughtsmen. Less frequently occurs the later predominant ibex (17. M 126b, Pl. XXVII. 1), once only the ostrich. Another animal—rare in the later civilizations—was of great importance to these Earliest Hunters: the crocodile (14. M 92d, Pl. XXVI. 1; 17. M 123a, Pl. XXVI. 2; 17. M 126b, Pl. XXVII. 1). Noteworthy is the absence of ass and cattle.

**Weapons.** Their weapon was a big C-shaped bow (12. M 82a, Pl. XXVII. 3).

**Hunting.** For hunting purposes nets were possibly used, as some pictures suggest (14. M 92d, Pl. XXVI. 1; 17. M 123a, Pl. XXVI. 2). Footprints of animals are hammered out with much care.

These Earliest Hunters are as well represented in the parts of the Western Desert hitherto explored as here in the Eastern.

Our observations and conclusions about social life and religion, and the definition of the style, will be given below in the description of the rock-drawings in the Western Desert.

### 5. UNDATABLE EARLY, PREDYNASTIC, AND PREHISTORIC PICTURES IN THE WESTERN DESERT

#### A. Autochthonous Mountain-dwellers

This desert has been little surveyed as yet, and therefore much less material is at our disposal. No specimens of the common type of the Libyan sheath-wearing people, as observed in the Eastern Desert, have been found here. But parallels to the older wedge-style of the Libyan sheath-wearing people are known from the rock-paintings at 'Uwenât and elsewhere in the Libyan Desert (*VVb.*, notes 20 and 21). It is noteworthy that the cattle accompanying these paintings of men are generally shorter-horned than those of the Libyan sheath-wearing people in the Eastern Desert. And, further, it is noteworthy that in the western cattle-paintings the udders are drawn between the hind legs. This gives a quite curious appearance to these cow-pictures and distinguishes them again from the eastern ones. The primitive draughtsman often draws not what he actually sees, but things and positions important in his mind. For instance, instead of the feet in side view, he puts the print of the feet on to the legs of the animal drawn in side view, because arriving at this point of his picture the footprints come to his mind. If he draws the udder between the hind legs, we must conclude that this view of a cow from behind is one particularly appreciated by the draughtsman. The only explanation why this view could please him is that he milked the cow from behind—an interesting fact for the ethnologist.

In the explored parts near the Nile neither this wedge-shaped nor the other Libyan sheath-wearing people have yet been found.

I claim Hamitic origin for one group of pictures. They are without any parallel, and the only example in the whole collection which we can call a work of art. On a shady wall near the Nile, in the sandstone cliffs between Hôsh and the Wâdi Sab'er-Rigâl, a hunter drew some animals and himself. The animals walk one behind the other, the biggest in front, as if they came down from the wadi to drink from the Nile: an elephant, a rhinoceros, the kid of an ibex, the ibex, the kid of a gazelle, and the gazelle. Below is another scene: an ostrich running with



his enormous stride, lifting his wings, and in front of him the hunter (35. M 467, 468a, 470, 472a, Pls. XX, XXI). The animals in the frieze are just sketched. With a few lines a spirited picture of each one is given, the elephant and the rhinoceros heavy and strong, the horned game svelte and graceful. The ostrich below is done with more detail, but the hunter is only superficially indicated. This decline of interest is remarkable. The hunter drew the ostrich with close attention; the image of his quarry dominated his mind. With the same attention he drew that important weapon, the arrow: the sinew-cutting broad tip and apparently its hafting, and the feathered or notched shaft. The 3-shaped bow is done with less interest and the hunter himself without any.

The evidence which inclines me to attribute this picture to a Hamitic artist is not strong. We more readily expect to find Hamites here than any one else. The 3-shaped bow we have already seen to be a Hamitic weapon. The broad-tipped arrow was in use among Hamites (but by no means limited to them). The fine artistry is not surprising amongst Hamites; indeed, from no other people in the desert can we expect it. The long tail of the hunter's garment, which is lightly indicated, may be intended to represent the smock-like dress which we know as Libyan from ancient Egyptian pictures.

The technique is singular. On the smooth surface of the wall the artist drew his sketch with a pebble or other blunt implement, just as one uses chalk on a blackboard. The softness of the lines, the lack of any intention of penetrating the patina of the stone, leads us to think that this artist was accustomed not to carve in rock, but to paint on rock.

It is at present not possible to date the picture. We can only say that it was probably made at a time when the hunter could observe, here near the Nile, elephants and rhinoceroses. The rhinoceros is the only specimen yet found in the rock-drawings of Egypt.

#### B. *Early Nile-valley Dwellers*

Drawings of these people have been found in the Western Desert at site 34. Here there are smooth limestone walls, and on them a series of drawings has been finely incised by these Early Nile-valley dwellers.

**Fauna.** The following animals appear: elephant, ibex, fox, crocodile or lizard; greyhound, cattle, ass. The asses are domesticated: two of them bear a burden on their back attached by girths (34. M 405a, Pl. XVI. 1).

**Dress.** Two of the five men represented wear a crook-like object at the girdle, which looks like a kind of Libyan sheath. It is exactly the same as that found in one drawing in the Eastern Desert (18. M 151a, Pl. XIII. 2) at that site which was particularly rich in drawings of the Early Nile-valley dwellers. Two others wear a garment reaching to the knees. One drawing (34. M 412a, Pl. XVI. 2) suggests that this cloth is a hide with the tail (compare *VVb.*, p. 7 and fig. 1). The fifth man has no definite characteristics.

**Hunting.** One man is hunting with a throwing-stick (34. M 412a, Pl. XVI. 2).

**Shipping.** Of the three sickle-shaped boats, one (34. M 406a, Pl. XIII. 1) is interesting; an ibex stands on the stern. In a drawing of these people in the Eastern Desert an animal's hide seems to be hung at the incurved stern of a boat (24 B. M 316a, Pl. XXXVI. 39). We suppose that here this ibex represents also the hide of an animal, probably sacrificed.

As has been said, this group of drawings is only slightly incised with a sharp-pointed implement. The hunter and some of the animals are not only drawn in outline, but also either

fully or partially filled in. The whole series, particularly the hunter with his greyhounds, is very lively. The draughtsman used his burin with a light and sure hand, like a modern artist his pencil.

The style is not bound by the tradition of any school, as we found in the drawings of these Nile-valley dwellers elsewhere. Round shoulders, *taille*, buttocks, articulations of the limbs are observed and recall in a surprising measure the artistic observation and feeling which appeared in pictures of the Mountain-dwellers in the Eastern Desert. Singular is the loop-like representation of the feet of men and animals.

The wall is full of drawings of very different times, most of them Coptic. These look fairly fresh, as do some demotic inscriptions. Twice an early Horus name (34. M 407a and M 423, Pl. XI. 2 and 3) occurs, weathered in the same degree as the pictures already described. We remember the presence of early Horus names in the main site (18) of these Nile-valley dwellers in the Eastern Desert.

#### C. *Eastern Invaders*

No record of the Eastern Invaders has been found in the Western Desert.

#### D. *Earliest Hunters*

Pictures of these people occurred very frequently in the sites in the Western Desert. Here our knowledge of their culture becomes considerably enriched.

**Fauna.** Elephant (35. M 436a, Pl. XXVII. 2; 35. M 457, Pl. XXVIII. 1) and giraffe (35. M 446, Pl. XXIX. 2; 35. M 455, Pl. XXVIII. 2; 35. M 457, Pl. XXVIII. 1; 35. M 462a, Pl. XXIX. 1; 31. M 388a, Pl. XXX. 1) prevail, antelope (35. M 436a, Pl. XXVIII. 2), gazelle, and barbary sheep (31. M 391a, Pl. XXX. 2) appear here and there, once a wolf-like animal (31. M 388a, Pl. XXX. 1), once a bird with four claws, once a lizard; crocodiles are common. Important is the existence of a dog in pictures of these Earliest Hunters (35. M 436a, Pl. XXVII. 2).

**Dress.** The representation of human beings is here as in the Eastern Desert so schematic that nothing about dress can be learned, with a single exception. At site 31 two people are drawn in a dancing attitude holding each other by the hand; one holds in his free hand a staff-like object. Both people have on their head a long, horizontal wavy line (31. M 384, Pl. XXXI. 1). It looks neither like a feather nor like a curl or plait. Another important drawing shows a man with greatly exaggerated ears (35. M 457, Pl. XXVIII. 1).

**Hunting and Social Life.** Some rectangular devices may be intended for game-traps (e.g. 31. M 391a, Pl. XXX. 2). Curious curvilinear heart-shaped designs have been found so far only in the cliffs along the Nile near Hôsh (35. M 452, Pl. XXXII. 1; 35. M 440a, Pl. XXXII. 2). Noteworthy in every one of these designs is the 'gate' which opens on to a 'corridor'; this in turn leads to the opening of the 'heart'. Possibly these are designs of traps put in the current of the river as a primitive labyrinth in which to catch fish or other creatures.

About the social life of these men we learn hardly anything. Hunting was their means of livelihood. People with the bow are rare. They occur twice, and both times hunting the elephant. If they attacked the elephant with bow and arrow we must conclude that they used poisoned arrows, the only successful means. And hence once more their interest in the knowledge of animals' footprints: the animal hurt by a poisoned arrow does not die immediately; it



has often to be followed a long way till the poison has worked. This we learn from modern primitive hunters.

Probably trapping an animal was more common than attacking it with a weapon.

**Religion.** Among primitive hunters of to-day magic plays an important part, either to ensure the success of a hunt or to appease the spirit of the dead game. Indeed, many of the drawings of these Earliest Hunters seem to embody magical ideas. Spirals occur here and there. They may, of course, be intended for anything, but once such a spiral comes out of the mouth of a giraffe (35. M 462a, Pl. XXIX. 1). Sometimes the spirals continue in irregular wavy lines, and in other pictures wavy lines accompany the game (35. M 446, Pl. XXIX. 2). I am inclined to believe that such spirals, wavy and intertwined lines, represented the entrails of the animals, and that these entrails were possibly connected with the spirit of the game.

At site 35 a sandstone cliff stands like an islet in the mouth of a wadi near the river. At the western site of this islet is a long wall crammed with giraffe-pictures. Here I had the impression that the reason for inscribing one giraffe over the other was a magical one: that the place was holy. It might be that the picture of a giraffe on this wall facing the setting sun established some connexion between the animal and the sun. Here I have to insert an observation. Almost all later rock-drawings are found in shady places. Rock-drawings of these Earliest Hunters are as a rule found in sunny places, often on the top of hills or boulders. It seems to me that it was important for these Earliest Hunters that their pictures could be seen by the sun.

If we suppose that these drawings of animals had a magical meaning, we can understand also the care applied to carvings of animals' footprints. The idea that it is possible to bewitch somebody's footprints has lasted almost until our own day and our own society.

Noteworthy is the frequency of crocodile-drawings far away from the Nile in the Eastern Desert. It proves that these people lived for a long time in close contact with the river, and it suggests that the crocodile played a role in their mythology.

One extraordinary drawing shows three men who are apparently urinating (31. M 386a, Pl. XXXI. 2). Also magic? and, if so, rain magic?

The technique of these Earliest Hunters is the most highly developed. Hammering out is the rule and it is done with remarkable skill. Every stroke of the working hand is done with the same strength, in the same direction, with the same effect. So the surface is regularly chipped out. But thinner lines, such as fingers or horns, are sometimes incised with a sharp-pointed implement. This employment of two techniques side by side occurs often in pictures of these men (e.g. 17. M 126b, Pl. XXVII. 1; 35. M 436a, Pl. XXVII. 2). In the soft limestone drawings are sometimes scratched out (e.g. 31. M 384, Pl. XXXI. 1). And such scratched-out surfaces are occasionally polished (e.g. 31. M 388a, Pl. XXX. 1).

The style is coarse. These people were devoid of any artistic sense. There is a tendency to avoid detailed forms of bodies. An elephant is sometimes drawn as one long curved line from the tail to the top of the trunk, while the rest of the body hangs down (e.g. 35. M 457, Pl. XXVIII. 1); and giraffes are sometimes drawn in the same way: neck and back are one straight line (e.g. 35. M 462a, Pl. XXIX. 1). Human beings are even more schematized than the animals, a stroke representing head, body, and penis, while arms and legs are symmetrically attached. It is curious that the fingers are often traced, but they are not always well counted. In this primitive conception the human beings somewhat resemble the lizards or crocodiles.

## CHRONOLOGICAL SEQUENCES

We have established four early groups of pictures; each one is distinguished by the culture it represents: dress, weapons, hunting implements, boats, &c., and by the style. Their antiquity is from the beginning attested by the presence of an early fauna, particularly elephants and giraffes, and by the absence of inscriptions. One of these groups we can link with a predynastic culture in the Nile valley: our Early Nile-valley dwellers.

What can we learn about the reciprocal relation of these early groups from superimposition and juxtaposition of the pictures, from patination, and from a higher or lower position on the rocks?

Pictures of the Earliest Hunters are overlaid by those of the Autochthonous Mountain-dwellers (*VVb.*, fig. 47 = 24 H. M 296) and by those of the Eastern Invaders (24 H. M 308). Therefore the Earliest Hunters are older than both.

The mutual relation between Autochthonous Mountain-dwellers and Eastern Invaders remains uncertain. Pictures of both often occur side by side. No undoubted superimpositions have been found. Once cattle belonging possibly to the Libyan sheath-wearing people overlies drawings of the Eastern Invaders (26. M 228). On one big wall the best parts are occupied by drawings of the Libyan sheath-wearing folk (*VVb.*, p. 6, fig. 42); at the sides and in the corners are pictures of the Eastern Invaders. Here these were the later comers. But another fine wall at another site has its best places filled by drawings of the Eastern Invaders, while at the less accessible places are drawings of the Libyan sheath folk (26. M 236). Here these were the later comers. We conclude from these various observations that at a certain period Eastern Invaders and Libyan sheath people lived together in the mountains.

Drawings of the Early Nile-valley dwellers appear nowhere in clear contact with those of Eastern Invaders or early Mountain-dwellers.

All sandstone and limestone rocks in the desert are covered with a patina, that is, a film created or at least conditioned by atmospheric influences. This film is darker than the stone itself. If the draughtsman carved a picture on a rock-surface thus patinated, he obtained a satisfactory effect: the lines he hammered out appeared light on a darker background. But his drawing was now, of course, itself exposed to atmospheric influences.

Let us imagine for a moment ideal conditions: The atmospheric influences, rain, dew, light, are absolutely constant. The whole desert is an immense rock-surface without any unevenness. The rock is everywhere of the same mineralogical composition. The drawings are all done in the same technique and are of the same size. Under these conditions patination would be a perfect means for computing the age of a drawing. The most ancient would possibly appear already covered with the same dark film as the whole rock-surface, and then every millennium later would be distinguishable by a lighter degree of patination; the modern would show the original light colour of the stone.

These conditions do not exist. First of all, atmospheric influences have not been constant. There are periods of greater and of less rainfall, of more and of less dew, of less and of more sunlight according to whether there are more or fewer clouds. Nowhere does there exist a perfectly even surface of any notable size. Even the smoothest walls have here and there a protuberance or a hollow, which may sometimes cause very different conditions for patination. The mineralogical composition of the rocks even in a small area may be very varied. And the



drawings are not done in the same technique and size. A narrow incised line is exposed in the highest degree to atmospheric influences; a narrow hammered-out line is naturally wider than an incised one, and it is less exposed; a broad incised line—often created by cleaning a hammered-out line with a sharp implement—is less influenced than a hammered-out one. A hammered-out surface is less exposed than a line; a polished surface is much less exposed than a hammered-out surface. That means that in the same due time a narrow incised line appears dark, a hammered-out one lighter than the incised one. A wide incised line appears lighter than a hammered-out line. A hammered-out surface appears lighter than the hammered-out line; a polished surface lighter than the hammered-out surface. In lines, narrow incised as well as narrow hammered-out, the patination occasionally accumulates to such a degree that the line appears darker than the patinated surface of the rock. It happens sometimes in the sandstone area that the whole surface of a drawing appears darker than the rock. In these rare cases an excrescence of lime has affected the rock-surface.

One observation is of particular importance: light is the main factor in patination. I found rock-drawings in cave-like shelters which the direct light of the sky does not reach. They were as pale as the rock-surface—neither was patinated. And rock-drawings facing the sky, that is, drawings on the top of boulders or hills, I found more patinated than corresponding ones on vertical walls.

Every drawing, then, needs a consideration of its size and technique, of its exposure to light, of any unevennesses in the surface near-by, of the mineralogical composition of the rock, and a general consideration of climatic changes. Only after these investigations may we be able to date a drawing by its patination. In other words, it is practically impossible without an enormous waste of time.

Nevertheless, we may dare to use patination in a very general way as a subsidiary means of dating. We have a great mass of collected drawings at our disposal. Here and there are obvious exceptions, but there exists a mean degree of patination for every group. Arab inscriptions do not exceed a certain limit of lightness, drawings of the Earliest Hunters do not appear outside a certain limit of darkness.

If we call the colour of the patinated rock surface 0 and the clear colour produced by an actual lesion of the film 10, we can by a rough and subjective estimation grade the degrees of patination of the different groups in this scale. (The rare cases of patination darker than the film we may leave out of consideration; if necessary we may range them from 0 to 10, black.) Drawings of the Autochthonous Mountain-dwellers (wedge-shaped and Libyan sheath-wearing people) I should estimate as covering a wide scale 3–6. Drawings of the Early Nile-valley dwellers are more 5 and 6 than 3 and 4, those of the Eastern Invaders more 3 and 4 than 5 and 6. Note-worthy is the contrast between a Middle Kingdom drawing and a picture of the Eastern Invaders at site 8 (8. M 69, Pl. X. 2). The exposure to weathering is pretty much the same. The patination of the dynastic drawings I should call 7, that of the Eastern Invaders 3. Surprising is the fact that all drawings of the Earliest Hunters are heavily patinated, say 0–3. We must remember that these drawings are generally more exposed to the light, as a result of the custom of these men of putting their pictures in sunny places. But, in spite of that, the regular very dark patination of the drawings of the Earliest Hunters suggests to me that a gap of time separates these from all the later ones.

An abnormally high position on the rocks occurred only twice in the area explored, at site

14 and site 30. At site 14 a large wall full of drawings (14. M 92d, Pl. XXVI. 1) is situated to-day about 8 m. above the level of the wadi. It is not that the full level of the wadi has been lowered, but that a high step in front of the decorated wall crumbled and was washed away, so that to-day the wall is almost inaccessible. At site 30 some drawings lie at a height of about 5 m. (some others near-by up the wadi are about 3 m. up). At a height of 2–2.5 m. are dynastic inscriptions and younger material. About 1.5 m. above the level is without inscriptions. It is here obvious that the current of the rain-streams has washed out the wadi-level, but only near the border. Here, as in site 14, the inaccessibly high drawings belong to the Earliest Hunters.

So the following sequences are obtained by the observation of the early drawings, their mutual position, and their relation to the rock. In a very remote time lived the Earliest Hunters. After them and not connected with them lived the Autochthonous Mountain-dwellers (wedge-shaped and Libyan sheath people). Contemporaneously with them, at an early date, lived the Eastern Invaders. Contemporaneously with both, but only in a later period, lived the Early Nile-valley dwellers.

The last means for dating rock-drawings are accompanying surface-finds, traces of settlements, and tombs. But, again, only in an ideal case can this means be applied: if one definite group of drawings is found exclusively on the walls, and only one definite type of remains, say, flint implements, is to be found on the earth near-by. And only if such a definite type of drawings is repeatedly accompanied by the same definite type of implements can we conclude that the authors of pictures and implements are identical. Stone implements and potsherds have been collected in considerable numbers from the sites of rock-drawings, but hardly ever under conditions which would permit us to use them for dating.

### Appendix

#### EARLY BOATS IN THE ROCK-DRAWINGS

Rock-drawings all over the world are in some degree comparable. Nearly all have in common a certain primitivity. Styles exist, but they have not yet the sharp definition which makes a style unmistakable, like the style of dynastic Egypt, of ancient Greece or China. And the subjects of the rock-drawings are again of a similar primitivity all over the world: animals and men. We are therefore the more surprised to find boats in these Upper Egyptian rock-drawings, and boats in such great numbers. We know rock-drawings from all continents, but only in Scandinavia and in Egypt do they contain a mass of boats.

In the preceding classification the presence of particular forms of boats was the reason for ascribing one group of rock-drawings to people who lived in predynastic and early dynastic times in the Nile valley, and it was again the reason for claiming an overseas origin for the authors of another group of drawings.

On Plates XXXIII–XLI I have united most of the drawings of boats collected from the rocks exclusively in Southern Upper Egypt. For comparison some other early boat-pictures from Egypt and Mesopotamia have been added. The origin of every drawing is noted below it. Some are found in the literature cited above on p. 1 sq., others in the following books and papers:

A. BÉNÉDITE, *Le Couteau de Gebel el-'Arak*. Fondation Eugène Piot. Monuments et Mémoires publiés par l'Académie des Inscriptions et Belles-Lettres, 22 (Paris, 1916).



- E. HEINRICH, *Kleinfunde aus den archaischen Tempelschichten in Uruk*. Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka (Berlin, 1936).  
 G. W. MURRAY and O. H. MYERS, *Some Pre-dynastic Rock-drawings*. Journal of Egyptian Archaeology, 19 (1933).  
 W. M. FLINDERS PETRIE, *Diospolis Parva* (London, 1901).  
 W. M. FLINDERS PETRIE, *Prehistoric Egypt* (London, 1920).  
 J. E. QUIBELL and F. W. GREEN, *Hierakonpolis, II* (London, 1902).

Two main types of boats are distinguishable. One type is curved like a segment of a circle. We may call this form sickle-shaped boats or sickle-boats. The other main type has a straight base and more or less vertical prow and stern. We call it the square-shaped or square-boat. Between these two extremes are two distinct intermediate forms. One has the curved base of the sickle-boats, but the ends are curved inwards in various shapes. We call the type incurved sickle-boat. The other has sometimes a fairly straight base and the prow bent up in a right angle—by this peculiarity recalling the square-boats—but the stern is incurved. We call the type incurved square-boats. From the square-boat various different forms are derived. Prevailing straightness of lines is characteristic and common to them. We call them square-boat derivations A, B, C, D, E, and F.

The following list shows the distribution of various peculiarities among these different types.

Type	Sickle-boats	Incurved sickle-boats	Incurved square-boats	Square-boats	Square-boat derivation A	Square-boat derivation B	Square-boat derivation C	Square-boat derivation D	Square-boat derivation E	Square-boat derivation F
Number of boats	17	13	18	25	2	2	7	4	4	4
Strokes across the hull, which may indicate that the boat is lashed together . . . . .	1	1	2	—	—	—	—	—	—	—
Small vertical strokes on the prow . . . . .	4	3	4	—	—	—	—	—	—	—
Cabin . . . . .	8	10	12 perhaps 13	2	—	1	3	—	1	3 perhaps 4
Mast . . . . .	6	3	—	1	—	—	—	—	—	—
Standard or similar ensign on pole . . . . .	4	2	1	—	—	—	—	—	—	—
Sail . . . . .	2	—	—	—	—	—	—	—	—	—
Awning . . . . .	—	—	—	2	—	—	—	—	—	—
Oars . . . . .	3	2	4	1	—	—	2	—	—	—
Steering oars . . . . .	5	—	2	—	—	—	—	—	—	—
Fender . . . . .	5 perhaps 7	2 perhaps 4	—	—	—	—	1 perhaps 2	—	—	—
Stroke projecting from the stern . . . . .	—	—	5	1	—	—	—	—	—	—
Objects hanging from the incurved stern . . . . .	—	1	7	—	—	—	—	—	—	—
Hide or animal at the stern . . . . .	—	1	1 perhaps 2	—	—	—	—	—	—	—
'Wing'-like prow-ornament . . . . .	—	1	17	4	—	—	7	4	—	—
'Two ropes' as prow-ornament . . . . .	(1)	—	1	9	2	—	—	—	—	4
'Coloured ornamentation' of the lower prow and stern-piece . . . . .	—	—	—	3 10	—	—	—	—	—	—
Vertical strokes indicating the crew . . . . .	2	1	4	perhaps 11	2	—	3	1	2	2
Human being with upraised arms . . . . .	1	1	6	—	—	—	—	—	—	—
Towing crew . . . . .	—	1	—	—	—	—	—	(1)	—	2

The curved forms—sickle-boats, incurved sickle-boats, and incurved square-boats—have some peculiarities in common which are rare or absent in the square-boats of pure type, proving

thereby a fundamental difference. Strokes across the hull (e.g. 39) are found only among the curved forms. We may interpret these strokes as ropes holding the hull together. Curious are small vertical strokes at the prow. They are quite distinct from other vertical strokes indicating the crew. They appear on the upper side of the prow (e.g. 2, 8 (!), 26) and particularly in the angle if the prow is bent up (e.g. 44). This position suggests that they may have something to do with the binding of the boat, the prow being more tightly lashed than the rest of the hull in order to bring it to a point. Cabins are frequent, mostly one, sometimes two. Nearly half of the sickle-boats and more than three-quarters of the incurved sickle-boats and incurved square-boats have cabins. This leads us to a very important conclusion—that these boats had a broad beam. Masts and standards are further peculiar to the curved forms. Sails are rare in the whole collection; there are only two examples on sickle-boats. Oars and steering-oars (e.g. 4) are sometimes represented. The form of the blade of the oars in boats 38 and 45 is remarkable; the asymmetry is possibly not accidental. Many of the boats of the three curved types show a curious pear-shaped object hanging down at the prow (e.g. 7, 26). It is probably a fender. We have already concluded that these boats must have had a broad beam. It would be difficult to free these flat boats if they ran on a sandbank; in this case the fender would protect them. A stroke projecting outside the stern of some incurved square-boats (e.g. 43) is hard to explain. One would expect steering-oars here, but it looks more like a short rope. Peculiar to these incurved square-boats are three to four small pear-shaped objects hanging down from the incurved stern (e.g. 39); once, also, they are found on an incurved sickle-boat. At this same place in boat 39 is a little animal, possibly also in boat 45, and in boat 17 an ibex or gazelle stands there. Is this the hide of a sacrificed animal? Nearly all incurved square-boats display an extraordinary wing-like ornament on the prow. These wings occur in three types: with pointed ends (e.g. 34), with a ball or ring at each end (e.g. 39 and 43), or in a form recalling a horse's tail (e.g. 45). Strange as these wings themselves are the heads of the prow from which they issue, triangular (e.g. 39), or with a ring above the starting-point of the wings (e.g. 40), or T-shaped (e.g. 45). In most cases a third stroke issues from the same point or somewhat below it. It is evidently an element other than the wings. In 43 it ends also in a ring and looks exactly like the wings above, but in all the other cases (note 45) it is quite distinct. In most cases this stroke is directed inwards, occasionally (33 and 45) outwards. This suggests that it is a movable thing. If 45 really shows the same object, as I believe, we see it composed of two parts. This 'double rope'-like ornament is well known among the square-boats, but lacking among the curved types. I doubt whether boat 6 shows this ornament. Vertical strokes indicating the crew (e.g. 7) are comparatively rare. In boat 45 the different pose of the rowers is noteworthy; those in the prow propel, those in the stern steer. Human beings with upraised arms—a gesture well known from predynastic pots—occur in connexion with each of the curved types, mostly with the incurved square-boats (e.g. 8, 29, 30).

The square-boats of pure type differ from the curved ones already described, not only in their straight lines but also in their equipment. There are no strokes across the hull indicating some sort of binding, no small vertical strokes at the prow. Cabins are exceedingly rare. Only two boats, 64 and 67, out of twenty-five have it, and 67 is a doubtful form of square-boat. No square-boat has a free standing mast in the middle of the boat. But 64 has a pole supporting a line joining prow and stern. It may be an awning, and an awning, not a cabin, must be represented in 57. If we explain this pole as supporting an awning, we may explain a pole



attached to the stern in the extraordinary boat 72 as the same kind of awning-support. It was required only during hot sunshine, and was otherwise tied up out of the way. Oars are more rarely represented than in the curved boats. The reason may be that they were not so present in the draughtsman's mind. These square-boats lie straight on the water; much less of the oars is to be seen than in the curved boats, where the place of the rower is—on the bent parts—rather far from the water-surface. There is no fender. The crew is more often represented than in the curved forms: the less the draughtsman of a square-boat saw of the oars, the greater the impression the rowers made on his mind. The wing-like prow-ornament, so common in the incurved square-boats, occurs, but rarely (e.g. 51, 60). 'Two ropes' as prow-ornament are frequent. The very idea of adorning the prow at all is characteristic of the square-boat builders. Singular is the 'coloured ornamentation' of the lower portion of prow and stern in 50, 65, and 66. No human being with upraised arms ever accompanies a square-boat, though there are frequent representations of people.

From the lack of the cabin (and fender) we conclude that the base of these square-boats was not necessarily broad; it is possible that it was narrow. The absence of lines indicating any binding, and the straightness of the main lines, permits a further deduction that these boats, in the most elegant forms (e.g. 48, 49, 50), were dugouts. That a dugout can have vertical prow and stern of considerable height and be at the same time a good sea-going vessel is proved at the present day by boats in the South Seas. Indeed, a boat of the Solomon Islanders, with strings at the prow and mother-of-pearl inlay in the lower parts of prow and stern, gives us a vivid idea of what such a square-boat of these olden days may have looked like.

The comparison of our boats in the rock-drawings leads to important results. The sickle-boat as well as the incurved sickle-boat are well known from predynastic remains in the Nile valley. On the handle of the Gebel el-'Arak knife a square-boat occurs which has a striking parallel in the boat represented on a Sumerian seal-cylinder published by Heinrich. We can join to these a boat of no less striking similarity, boat 72. This boat is overlaid by another square-boat (26. M 242, Pl. XXIII. 2). The two ear-like ends on the top of the stern are not absolutely certain: the boat is superimposed on an animal-drawing, but the Sumerian boat of Heinrich shows two little strokes at just the same place. The square-boat on the Gebel el-'Arak knife induced its editor Bénédict to use it as a main link between early Egypt and early Mesopotamia. The form with vertical prow and stern is common in early Mesopotamia. But we learn from various representations that these Mesopotamian square-boats were made of reeds. Now it is not possible to cross the sea in a reed-boat.

The people whom we called Eastern Invaders are an entity quite distinct among the peoples represented in the Upper Egyptian rock-drawings, different from the cattle-breeding Mountain-dwellers, different from the Early Nile-valley dwellers. They are connected with a form of boat, the square-boat, foreign to Egypt, well known in early Mesopotamia. Whence came the Eastern Invaders? One thing seems to be certain: they came from overseas. The voyage from the Persian Gulf to the shore of the Red Sea is long. If sailors came all this way they may have come from even farther. Or they may have had their homeland somewhere between Egypt and Mesopotamia. It is not probable that people using reed-boats on the Euphrates transformed their boats into wooden ones and risked long voyages overseas. It is more likely that a sea-going form of square-shaped dugout became copied in reed. It is on the whole more probable that these Eastern Invaders came from an unknown homeland to

Mesopotamia as well as to Egypt. They were intermediaries. In Egypt, judging from the number of their records in the desert, and the condition in which they are found, they lived for a great length of time, but the infiltration of Mesopotamian influence into the Nile valley appears quite suddenly in the time immediately before the rise of the dynasties. I think that these Eastern Invaders were in permanent connexion with countries overseas. They formed a channel, and the rise of civilization in Mesopotamia could be suddenly transmitted through this channel to Egypt. About the race and language of the Eastern Invaders we, of course, know nothing, nor do we know to what extent they were not only intermediaries, but also originators of civilization.

The multitude of boat-pictures in the deserts holds one more important piece of information: the incurved square-boats are an obvious mixture of elements belonging to sickle-boats on the one hand and to square-boats on the other. They were created by Early Nile-valley dwellers, as is proved by the presence of people with upraised arms, but created under the influence of the square-shaped boats of the Eastern Invaders. That will not happen quickly in a primitive society. It means a lasting influence: it means possibly even a racial intermixture. The derived forms of square-boats A-F display the same spectacle of an intermixture of two different traditions of ship-building. Some of the pure square-boats suggest, by the clumsy form of the bent ends (e.g. 59, 68) and by prolongations (e.g. 70) at the prow and stern, that they are no longer made of wood, but of a flexible material, in fact, that they are made of papyrus. This indicates that these Eastern Invaders were acquainted with the Nile valley. The frequency of elephants amongst their drawings points in the same direction. So we conclude that the Eastern Invaders swarmed throughout a long period all over the Eastern Desert, stretching from the Red Sea in the East to the Nile in the West. They formed in this part of Egypt a link between the Nile valley and countries beyond the Red Sea.



## RESULTS AND PROBLEMS

WE started our investigation with modern inscriptions and drawings, and step by step we proceeded into the past. We were enlightened through some millennia by inscriptions; farther back we were guided on our way through the dawn of early dynastic and predynastic times by the excavator's work in the Nile valley; and, finally, we reached a period of human life beyond the hitherto known, the savage days of our Earliest Hunters. Let us travel the way again.

The most ancient rock-drawings are quite distinct from anything later. Animals, footprints of game, traps, geometrical designs, occupy the mind of these men; they have little interest in the portrayal of human beings. In the moment of the first discovery of these drawings and again after having studied them week after week, I feel that they are the expression of quite a foreign mentality. It is the same mentality, the same genius, which inspired artists of other primitive hunters, in Australia as in Northern America: animals, footprints, and geometrical designs are the result. Our Earliest Hunters lived in close contact with the Nile—the crocodile suggests it. They had the bow and the dog. Whence did they come? Did they swarm into the Nile country from somewhere in Inner Africa, at a time when herds of elephants and giraffes lived there? Or did they enter the continent from the north and wander along the Nile? Whither did they go? They seem to disappear in Egypt.

Then appear the Hamites, and with them cattle. Whence did they both come? These Hamites did not leave the country. Their sons still live there to-day.

Into this now Hamitic country between the Nile and the Red Sea entered a foreign people—seafarers. At one time they were in communication with Mesopotamia. But whence did they come? People dwelling on open coasts, and more especially those on islands, develop the art of shipping and the courage to cross the sea. Throughout a long period these invaders filtered from the Red Sea into the Eastern Desert. They swarmed over all the mountain region and reached the Nile. They formed a channel through which Mesopotamian influences reached Egypt. Were they elsewhere such intermediaries? Is the sudden rise of civilization in Mesopotamia, Egypt, and India connected with these seafarers? One thing is certain: we have not hitherto taken the sea sufficiently into account as a way of migration of mankind and ideas.

Another people appears in the western frontier of the Hamitic land between the Red Sea and the Nile. Again shipping is the main feature of their life, this time river-craft: the Nile is the waterway of human migration.

Characteristic in their pictures is the gesture of upraised arms. We believe that it indicates prayer. In one of the drawings of these people in the Eastern Desert a human being—probably a man—stands in such a position and from each arm something hangs down (18. M 154a, Pl. XV. 2). The same gesture and the same peculiarity of an object pendant from the arms occur in Saharan rock-drawings of hunting-scenes. A relief in Ghadames shows a sitting woman, from whose upraised arm hangs down the enigmatic object. It is possibly a part of the dress. This identity of an uncommon gesture and the more uncommon dress in a rock-drawing of the Eastern Desert and from sites far in the Sahara points to a connexion—earlier, contemporary, or later—of the Early Nile-valley dwellers with the West. The dwellers in the

Sahara were in all probability Hamites; a strong Hamitic vein in the Early Nile-valley dwellers is suggested by this surprising coincidence. A crook-like thing on the girdle of Early Nile-valley dwellers may be a Libyan sheath—that points in the same direction. The style of some few drawings of the Early Nile-valley dwellers in site 34, by its plastic, well-articulated forms of human bodies, again recalls Hamitic artistic feeling. But that is the exception. Most of the drawings of these people look stiff. They are under the influence of quite another artistic tradition. These stiff human bodies recall the style of the Eastern Invaders. That Eastern Invaders and Early Nile-valley dwellers were for a long time in close contact is proved by the intermixture of the heterogeneous sickle and square forms of boats. What called the Early Nile-valley dwellers to the Eastern Desert, there to cover the rocks with boat-drawings? The Eastern Invaders already had the habit of hammering out boat-pictures. Did there exist any idea of a migration of the soul to the homeland of the ancestors beyond the sea in the mythology of the Eastern Invaders? Was the boat-drawing a commemoration or an equipment of the deceased? Further, did this idea come from the Eastern Invaders to the Early Nile-valley dwellers?—by racial admixture? And did these then go to the Eastern Desert to draw their boats, accompanied by drawings of people praying in their style in commemoration of their own dead?

In the Eastern as well as in the Western Desert early Horus names occur at sites frequented by these Early Nile-valley dwellers. Insignificant lines—but no less than the testimony that the son of the gods had awakened to a consciousness of himself, that the glorious history of the Pharaohs had begun.

And then the records in the deserts dwindle. The rainfall had lessened, the big game had left the country, and men had discovered that the permanent flowing water of the Nile was a treasure. They had learnt organized agriculture. To-day the Upper Egyptian fellah tells the story that the first Pharaoh invented the *shādūf*. True tradition or excellent fiction—he could not better formulate the truth that irrigation was the key to the rise of dynastic civilization, and that this civilization was created by powerful individuals.

Some hunters and herdsmen remained in the desert, but the focus of human life was the Nile valley. For the people in the Nile valley the desert became a strange world. They crossed it on their way to the mines or to the coast, but the sons had become foreigners in the country of their fathers.

Thousands of years passed. In the Nile valley the bright manifestations of highest culture, in the desert some forgotten herdsmen and hunters. One day these awakened—the day when the camel came to their mountains. It seems that the joy of taming, of subduing, and of riding this strong giant filled the desert-dwellers with a feeling of their power and a spirit for adventure and war. In all the former rock-drawings peace prevails. In the pictures of the camel-owners—Blemyans and Arabs—all is war. And war they brought wherever they went.



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Aramaic, 4, 10.

Coptic, 8, 9, 10.

Demotic, 9, 10.

Greek, 4, 5, 6, 7, 8, 9, 10.

Hieratic, 4, 9, 10.

Hieroglyphic, 4, 5, 6, 7, 8, 9, 10, 25.



INSCRIPTIONS: (*cont.*)

Himyaritic, 4, 7, 10.  
 Latin, 5, 7, 10.  
 Nabataean, 4, 5, 7, 10.  
 Thamudic, 5, 10.  
 in unknown characters, 10.

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1 ——— 10 cm. See p. 15.

38. M 507



2 ——— 10 cm. See p. 15.

16. M 112

## COPTIC



3 ——— 10 cm. See p. 17.



34. M 409

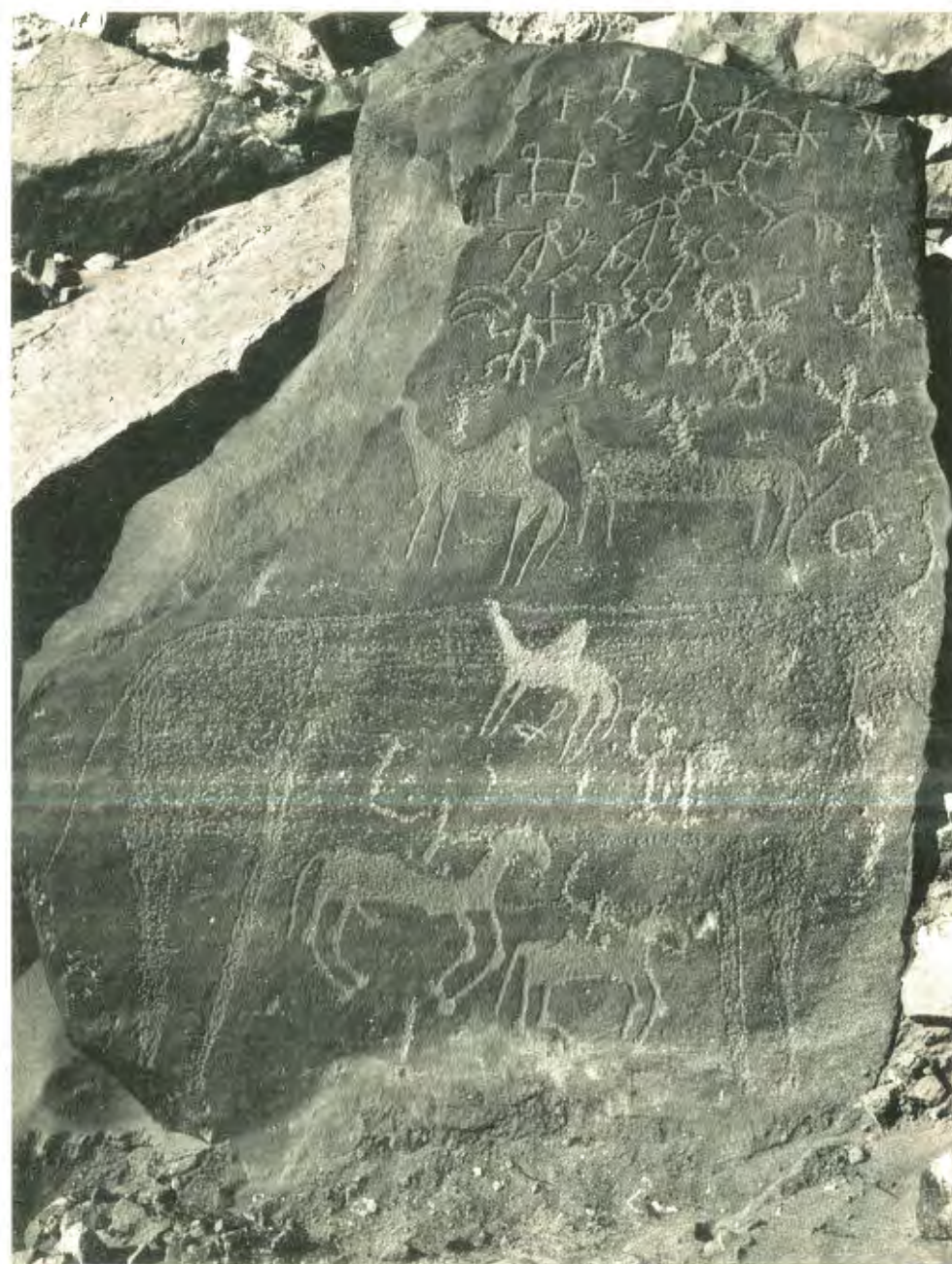




1 — 10 cm. See pp. 15, 16.



24H. 81a



2 — 10 cm. See p. 16.

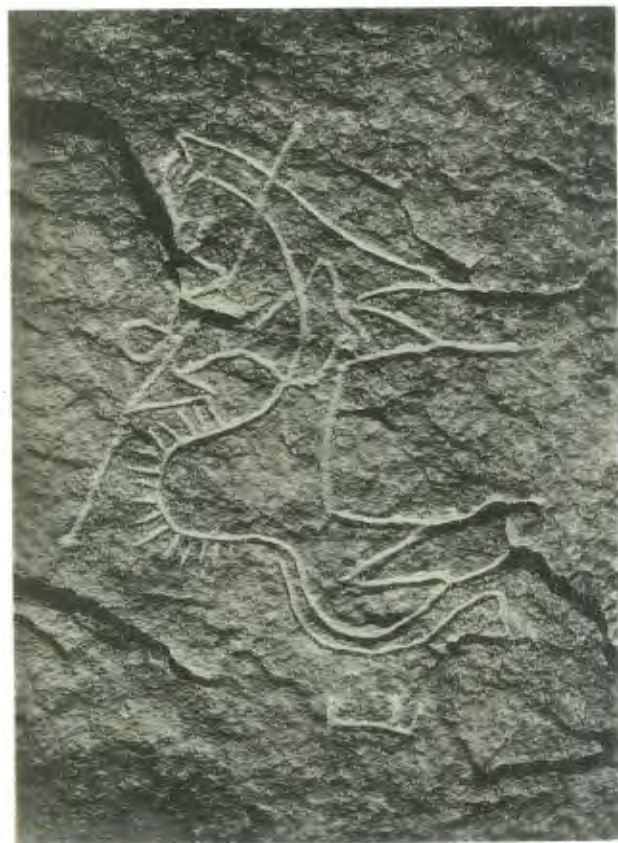
26. M 230



18. M 159  
10 cm.  
See p. 16.



3



18. M 157

See p. 16.

10 cm.

1



18. M 156

See p. 16.

10 cm.

2



20. M 183

See p. 16.

10 cm.

4







1 | 10 cm. See p. 16.

38. M 498



2 | 10 cm. See p. 16.

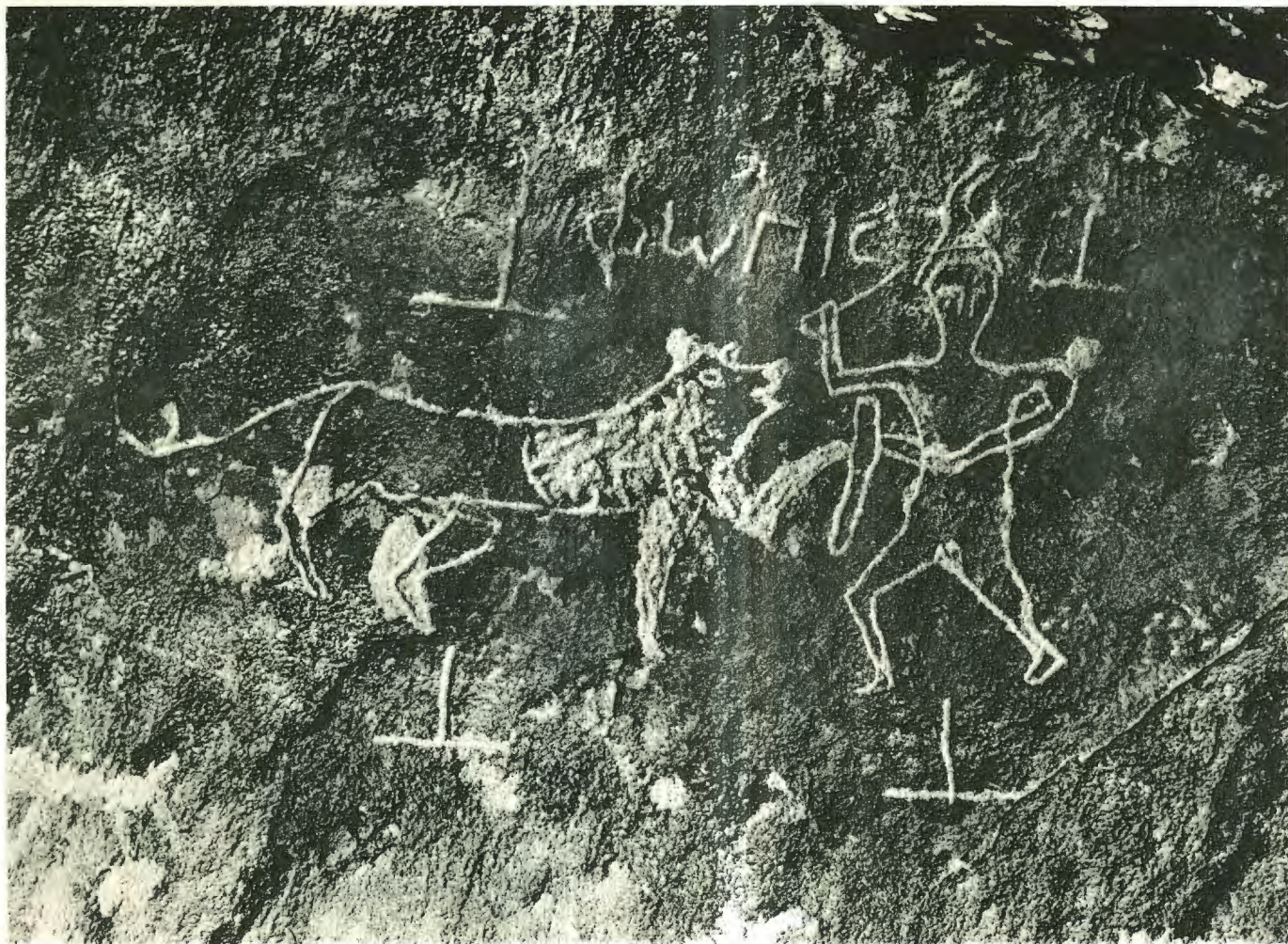
38. M 501



3 | 10 cm. See p. 16.

38. M 503





1 |—————| 10 cm. See pp. 16, 17.

21. M 186a



2 |—————| 10 cm. See pp. 16, 17.

21. M 187

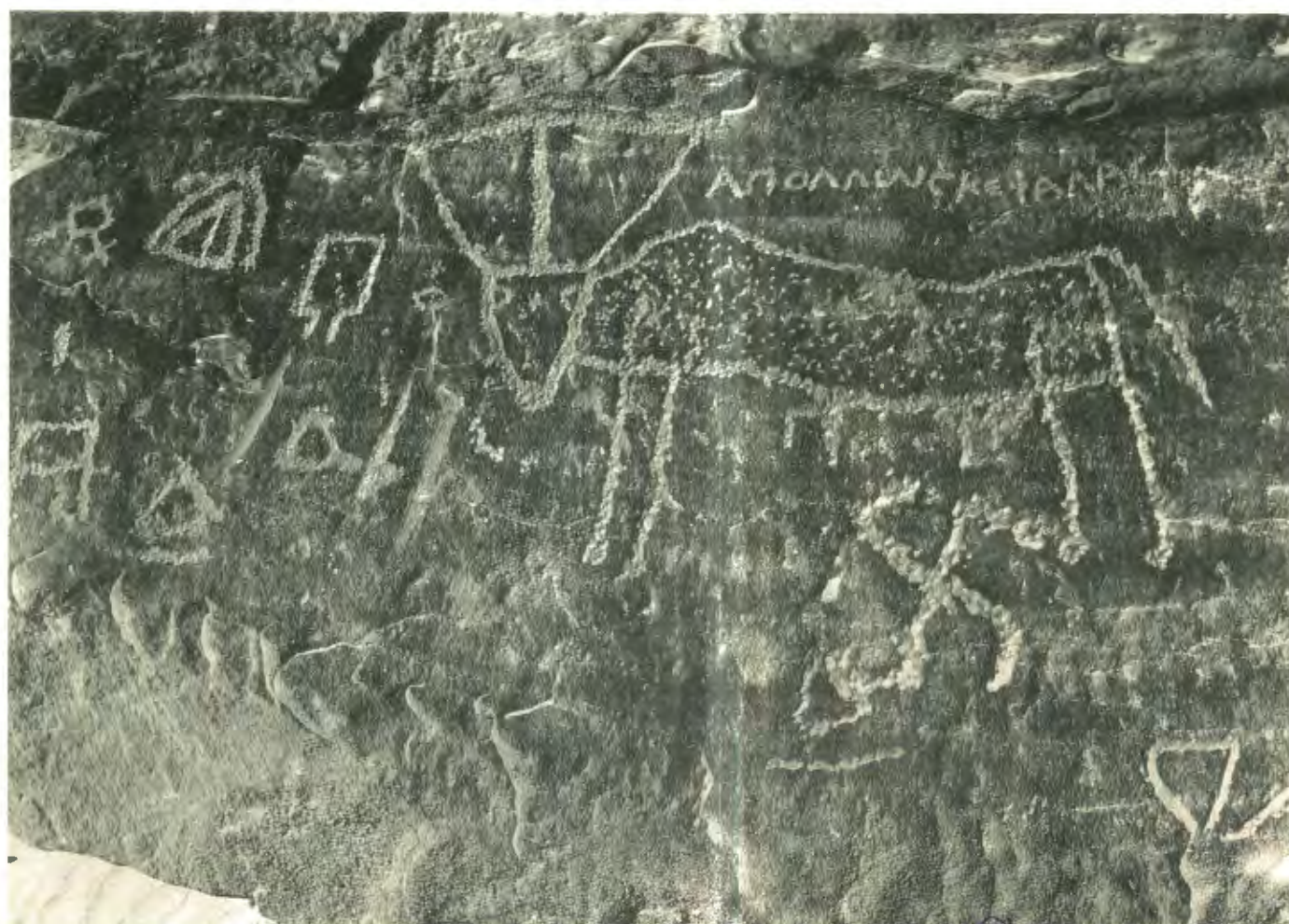






1 |—————| 10 cm. See pp. 16, 17.

21. M 188a



2 |—————| 10 cm. See p. 17.

21. M 191





10. M 79  
See p. 17.



2



18. M 146a

See p. 17.

10 cm.

3



35. M 433

See p. 17.

10 cm.

1

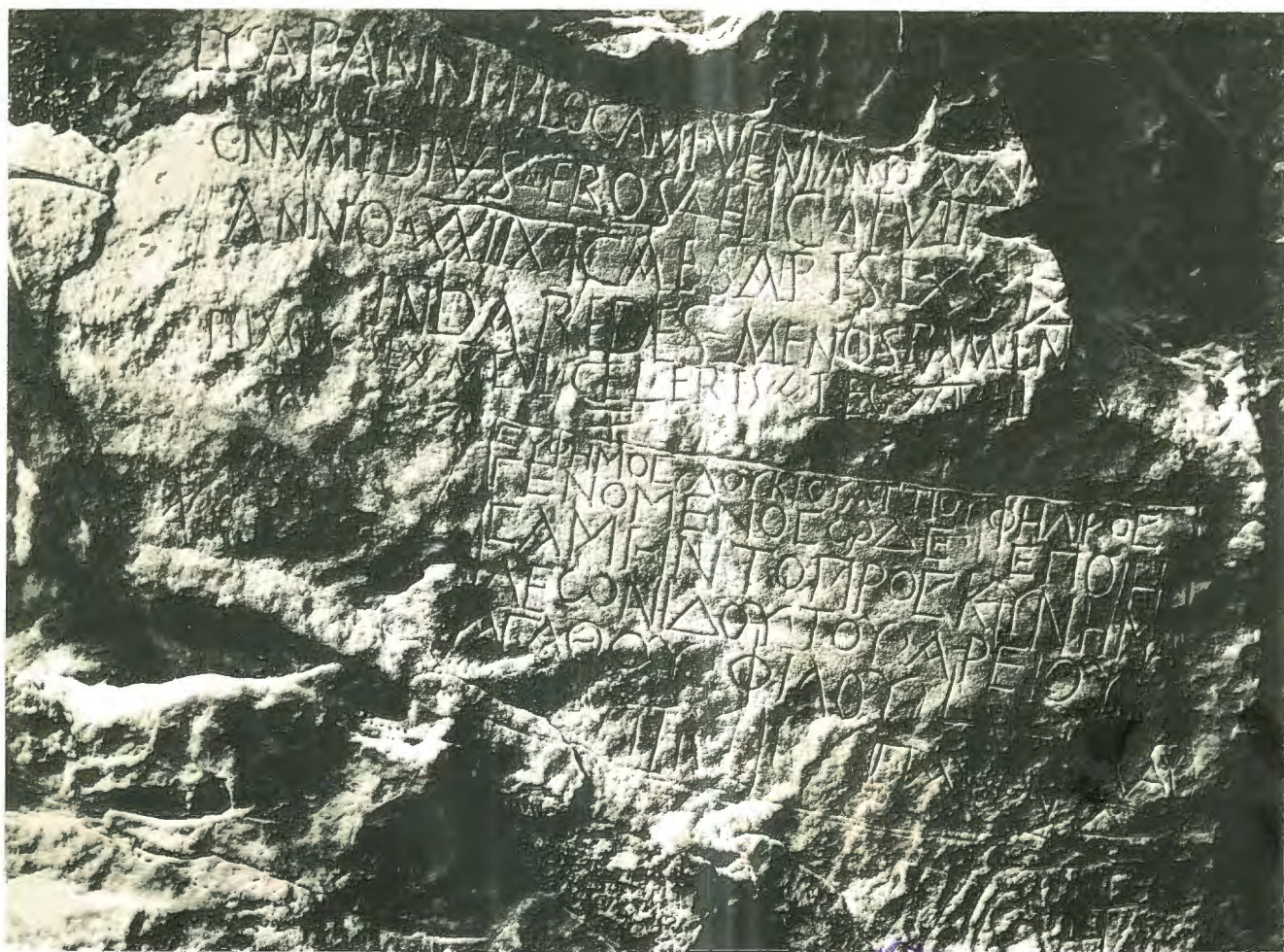






1 ————— 10 cm. See p. 17.

24B. M 317



2 ————— 10 cm. See p. 10.

24B. M 318 quater







1 ——— 10 cm. See p. 18.

35. M 460



2 ——— 10 cm. See p. 10.

30. M 365a







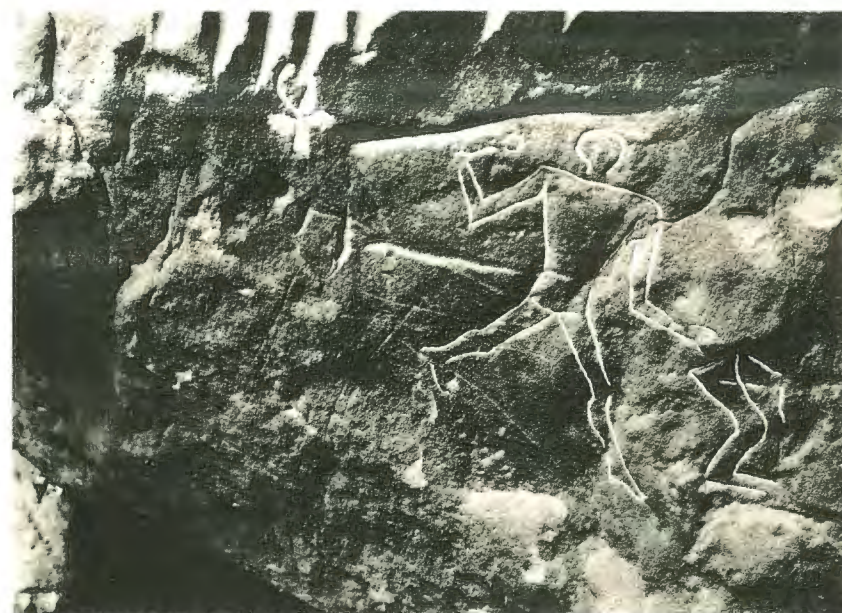
1 | 10 cm. See p. 10.

30. M 342



2 | 10 cm. See pp. 26, 34.

8. M 69



3 | 10 cm. See p. 25.

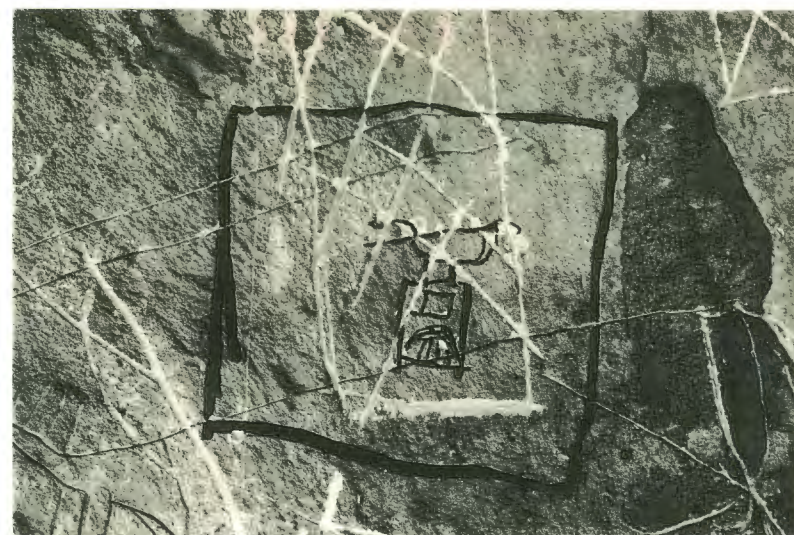
18. M 169a





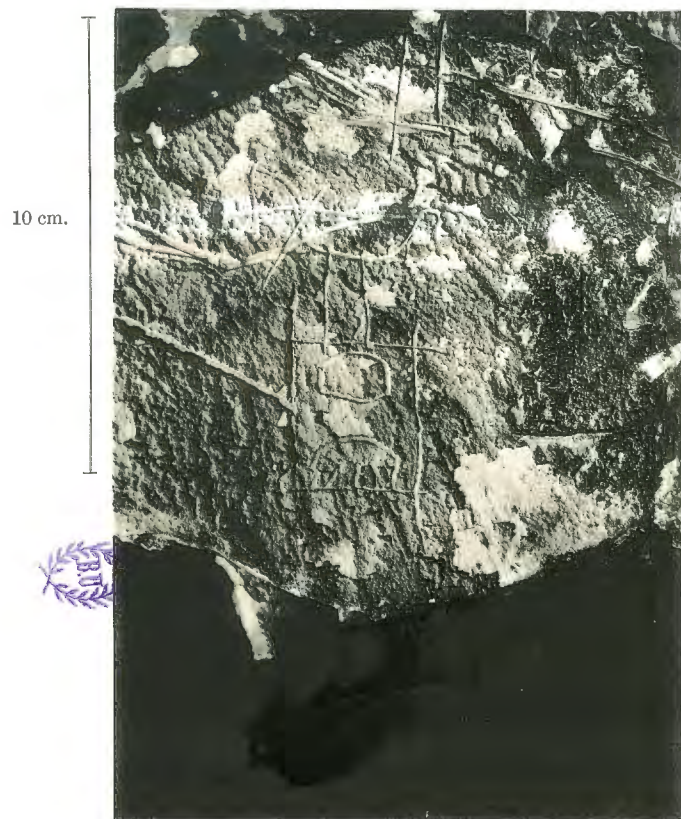
1 | 10 cm. See pp. 10, 25.

18. M 170a



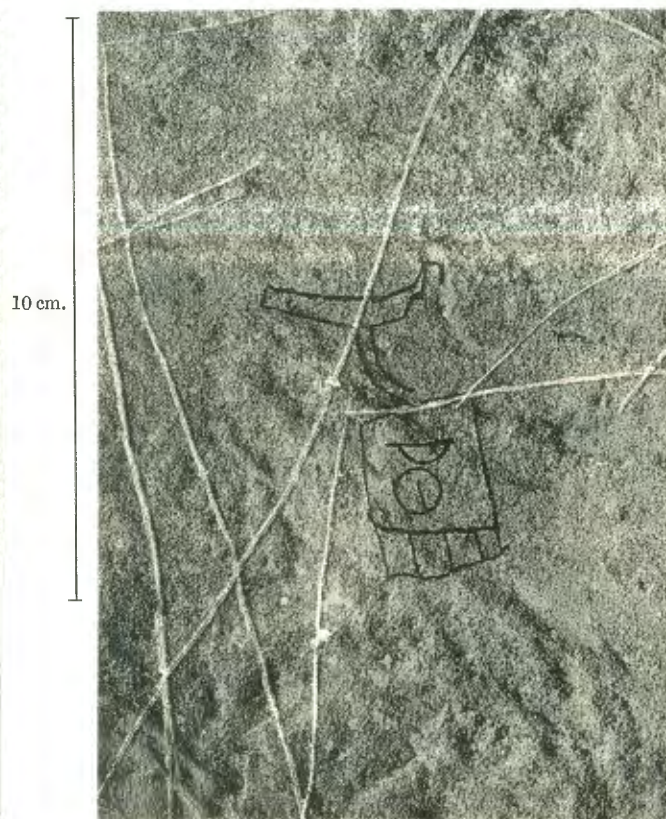
2 | See pp. 10, 31.

34. M 407a



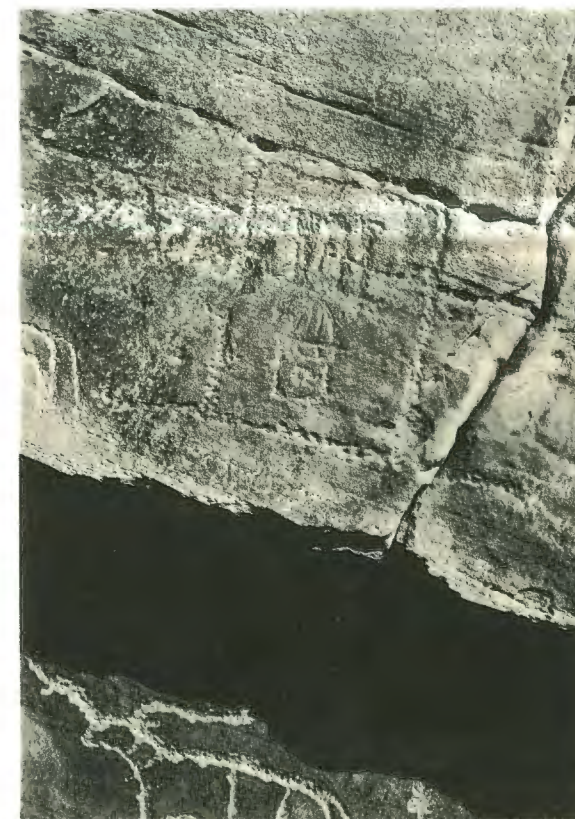
3 | See pp. 10, 31.

34. M 423



4 | See p. 10.

40. M 521a



5 | 10 cm. See p. 10.

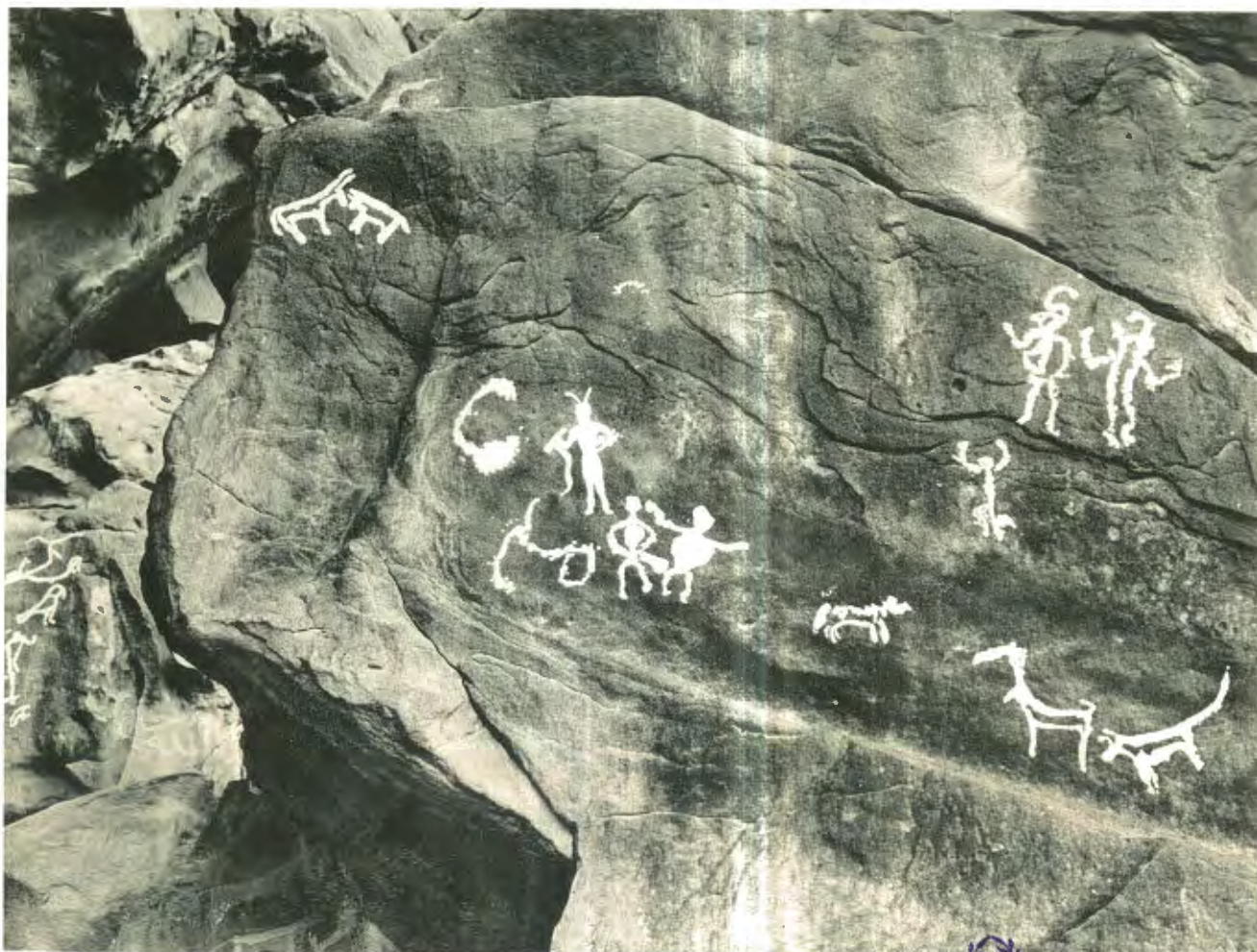
5. M 45





1 |——| 10 cm. See p. 25.

26. M 241a



2 |——| 10 cm. See pp. 24, 25.

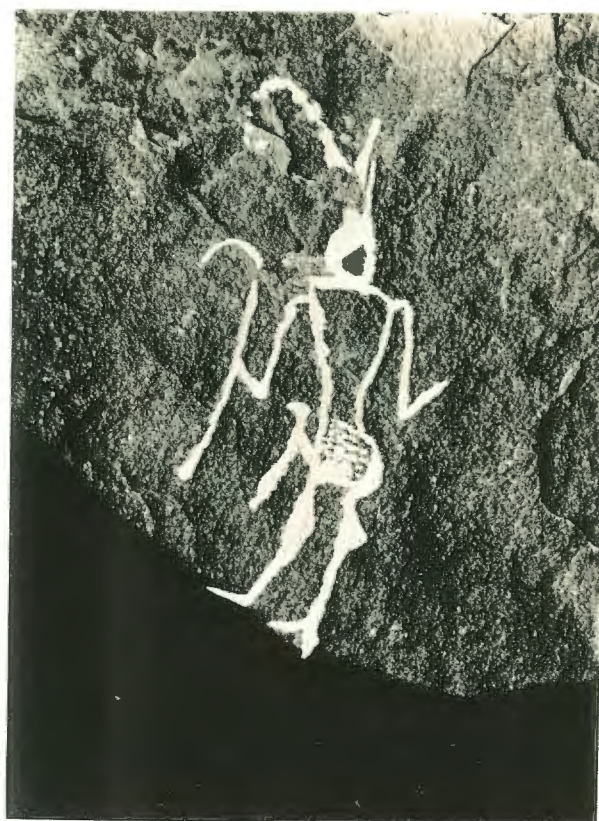
18. M 172a







1 ————— 10 cm. 34. M 406a  
See p. 30.



2 ————— 10 cm. 18. M 151a  
See pp. 24, 25, 30.



3 ————— 10 cm. See pp. 24, 25.



18. M 137a





1 | 10 cm. See p. 24.

18. M 140

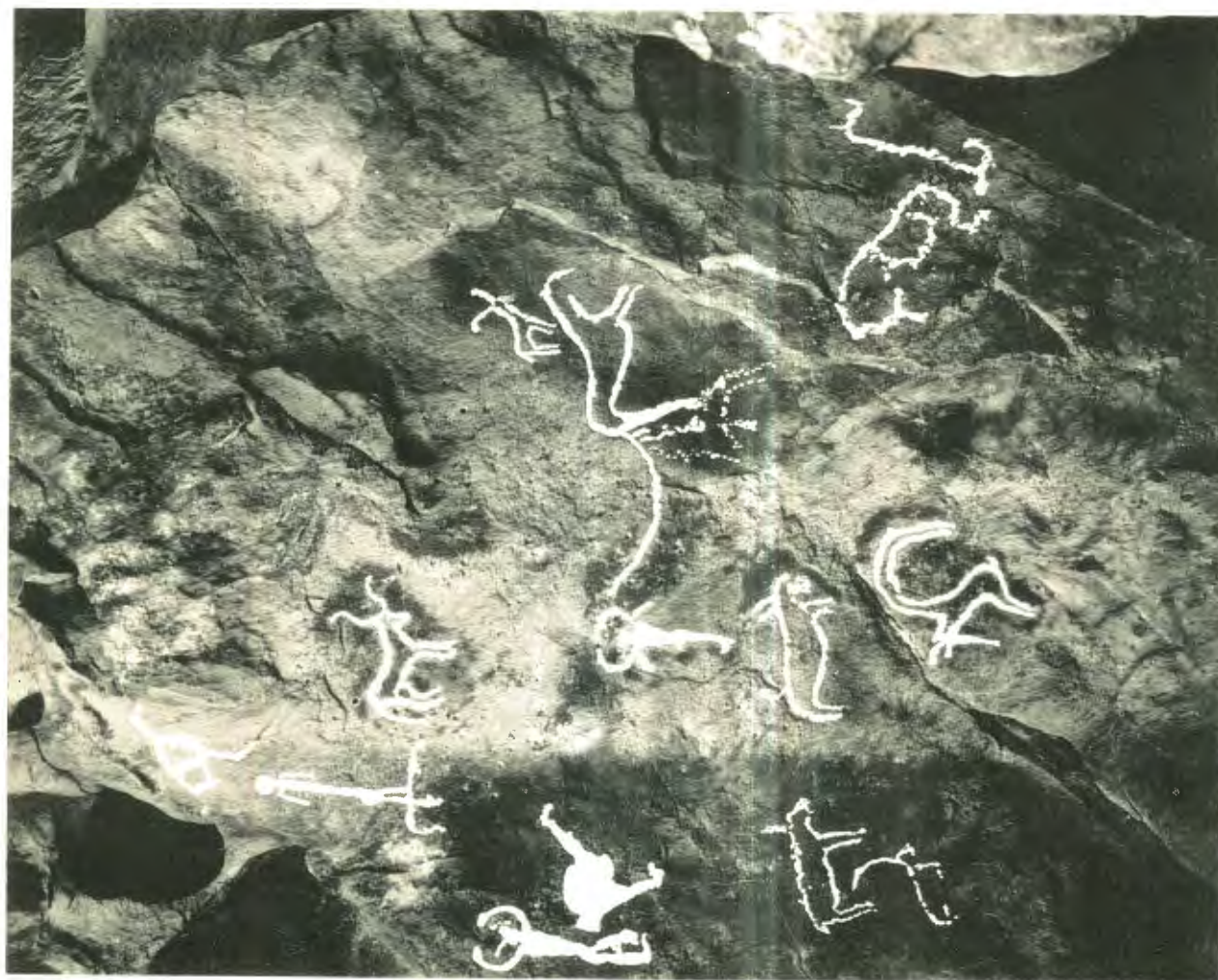


2 | 10 cm. See pp. 24, 26.

18. M 141a







18. M 154a

See pp. 24, 25, 40.

10 cm.

2



18. M 147a

See pp. 24, 25.

10 cm.

1







1 ————— 10 cm. See p. 30.

34. M 405a



2 ————— 10 cm. See p. 30.

34. M 412a

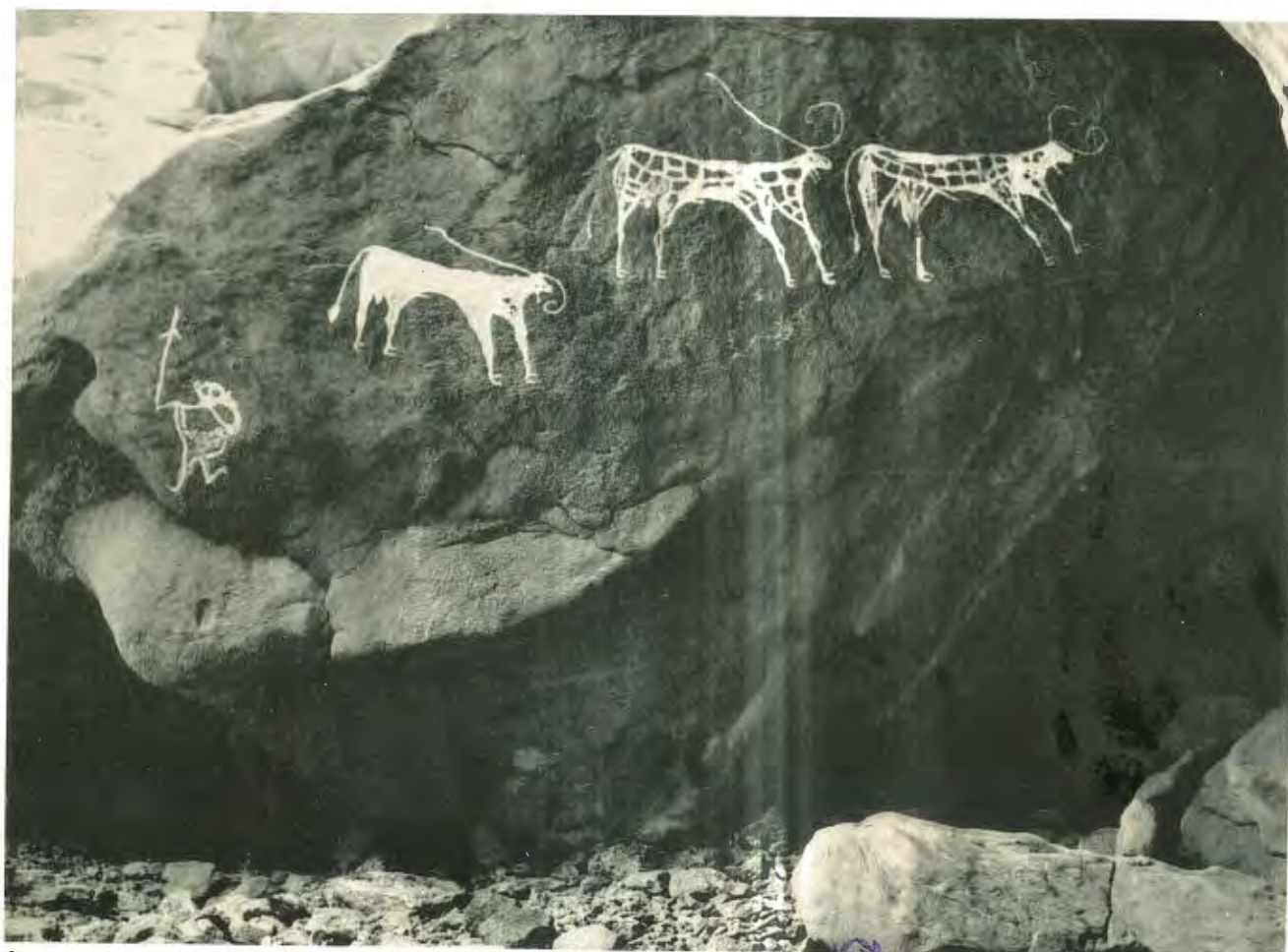






1 | 10 cm. See p. 23.

4. M 43



2 | 10 cm. See p. 23.

24 н. M 308 bis a

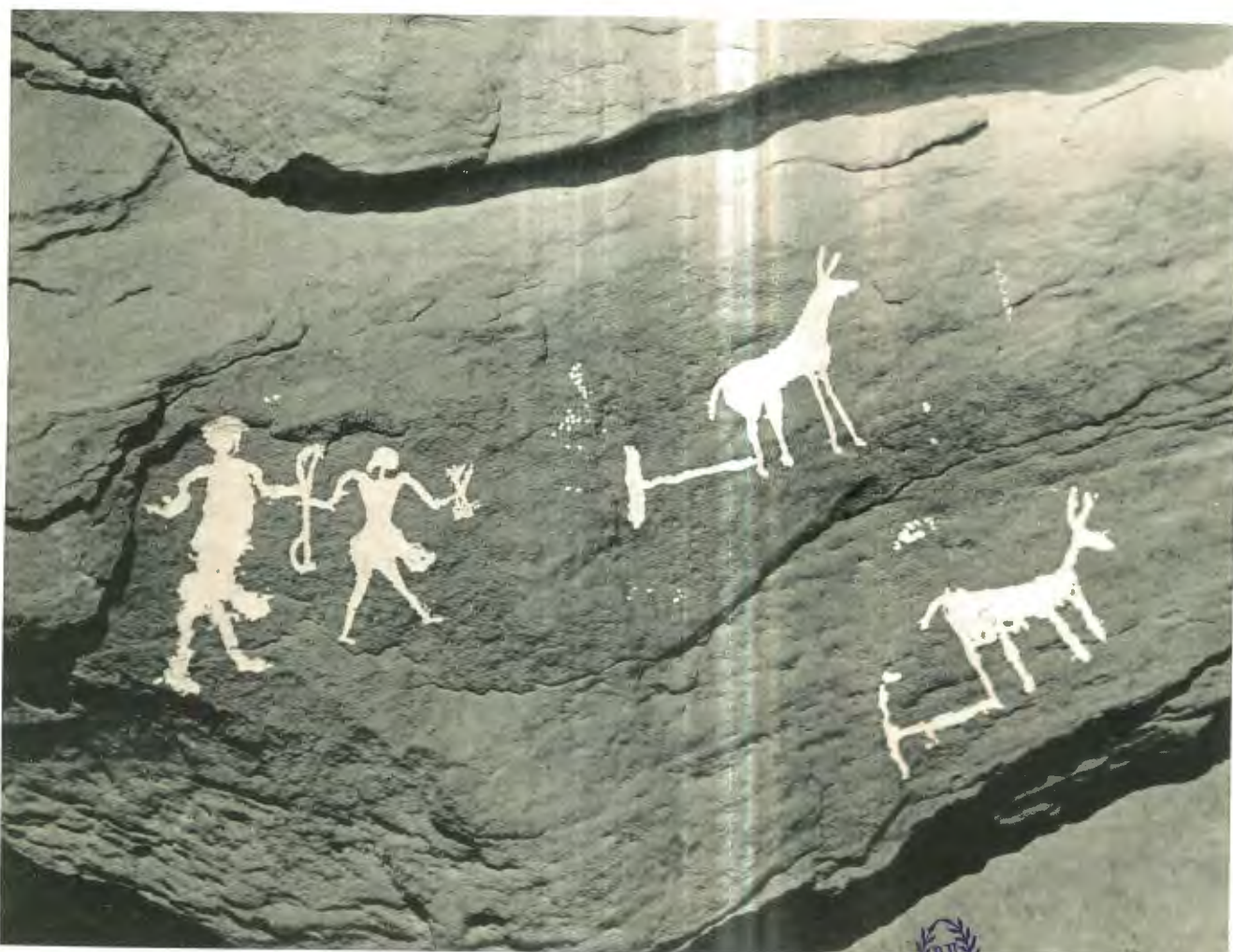






1 |—————| 10 cm. See p. 21.

26. M 240



2 |—————| 10 cm. See p. 21.



28. M 278a



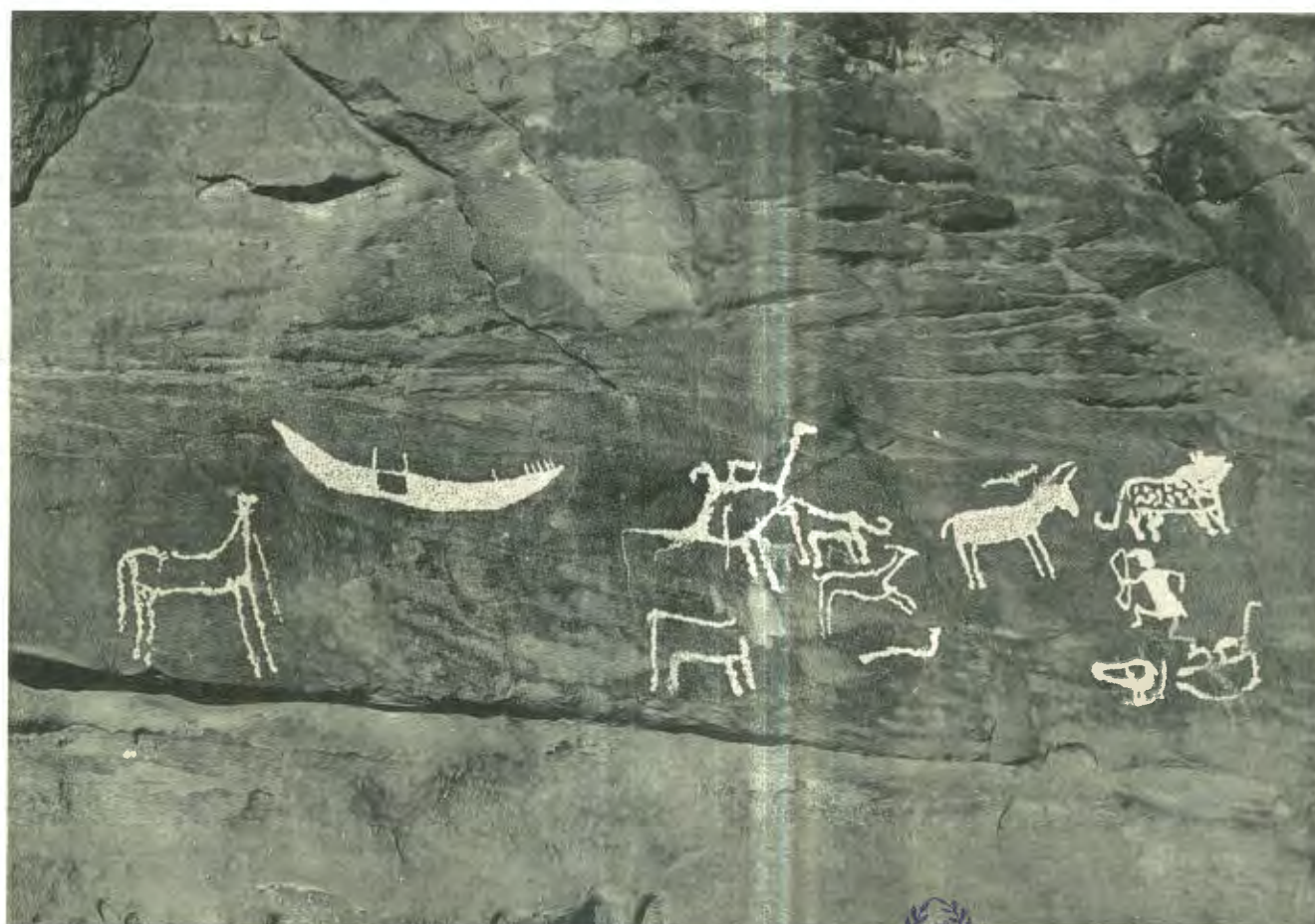


1 | 10 cm. See p. 21. 25. M 207



2 | 10 cm. See p. 21.

14. M 95

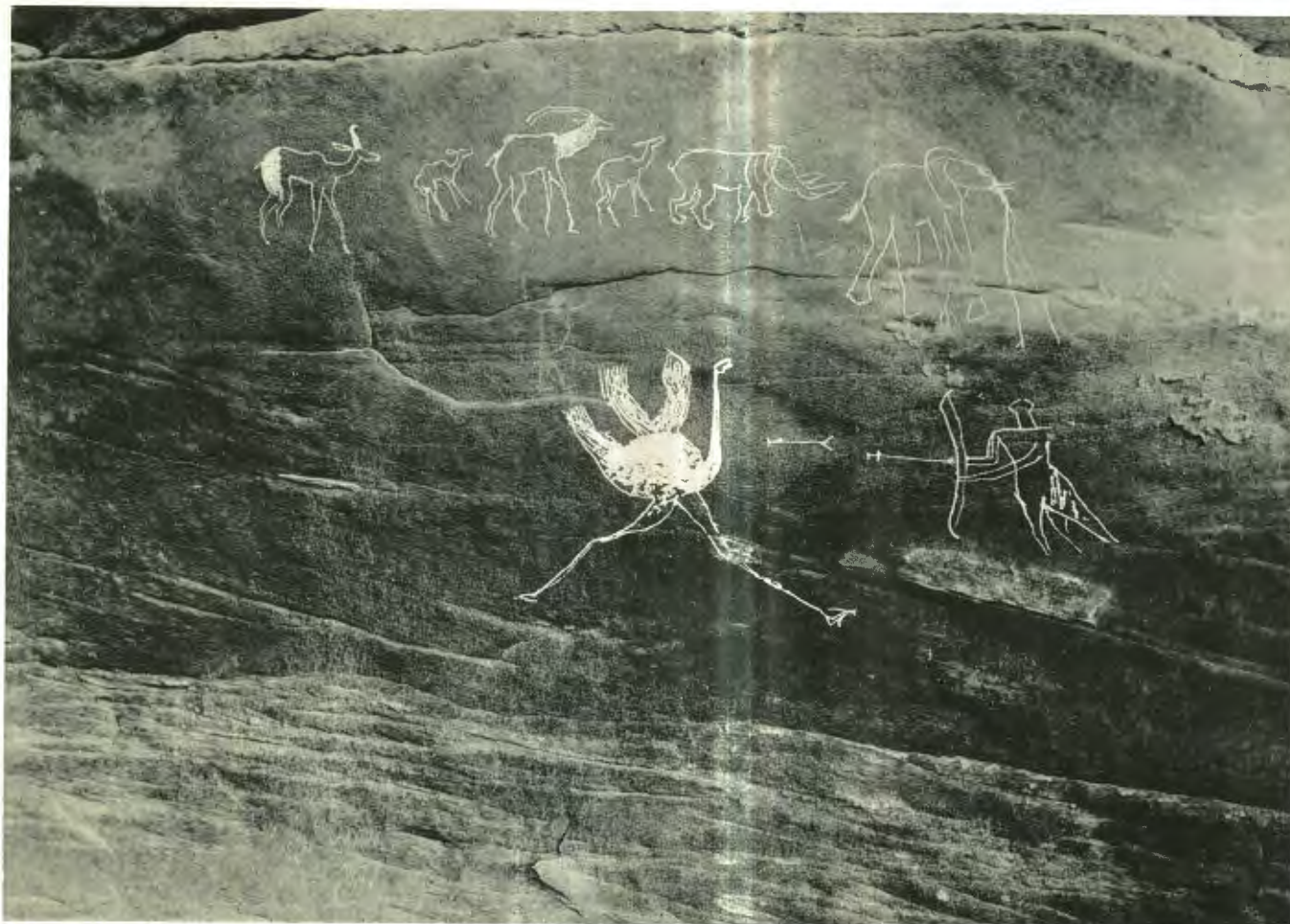


3 | 10 cm. See p. 22.

10. M 81b







1 |————| 10 cm. See p. 30.

35. M 467

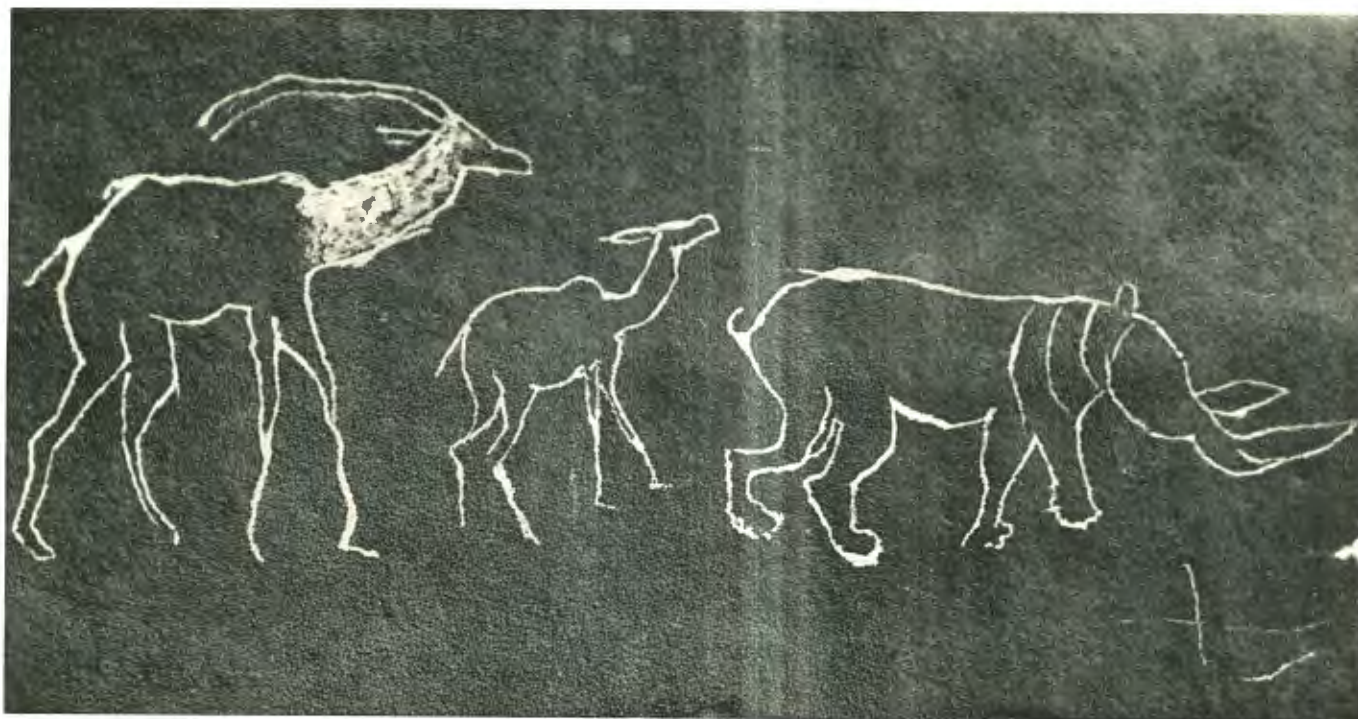


2 |————| 10 cm. See p. 30.



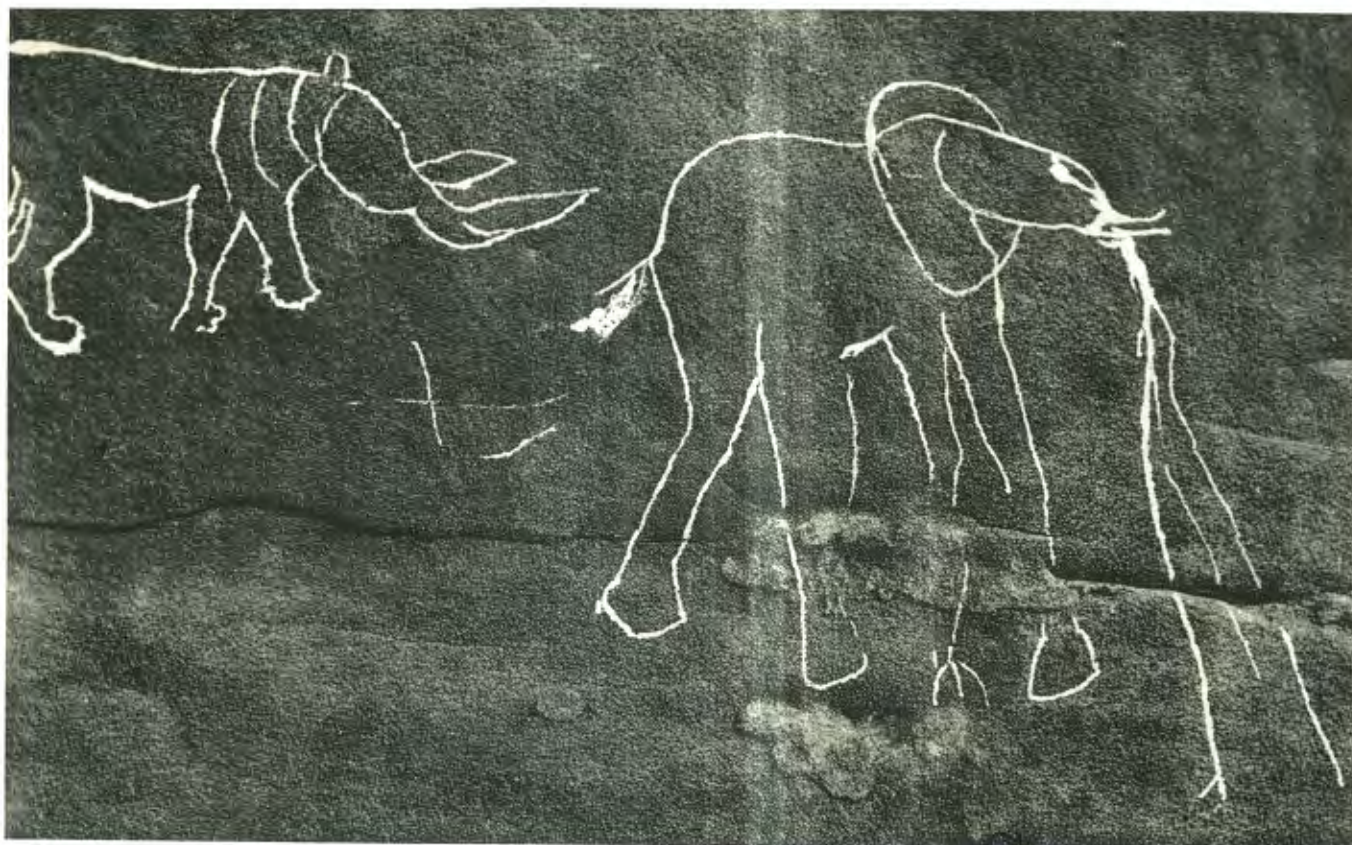
35. M 468a





1 |—————| 10 cm. See p. 30.

35. M 470

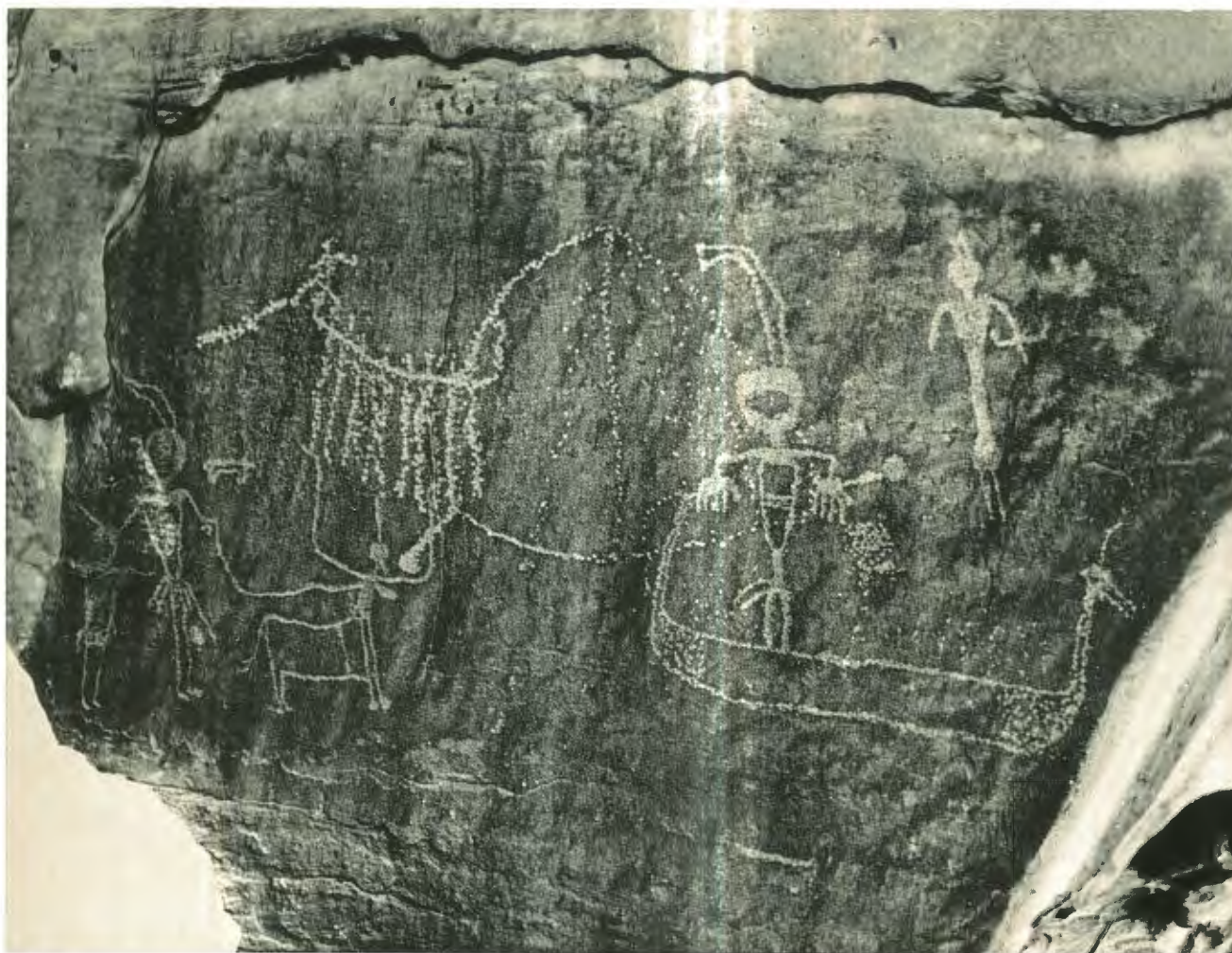


2 |—————| 10 cm. See p. 30.

35. M 472a

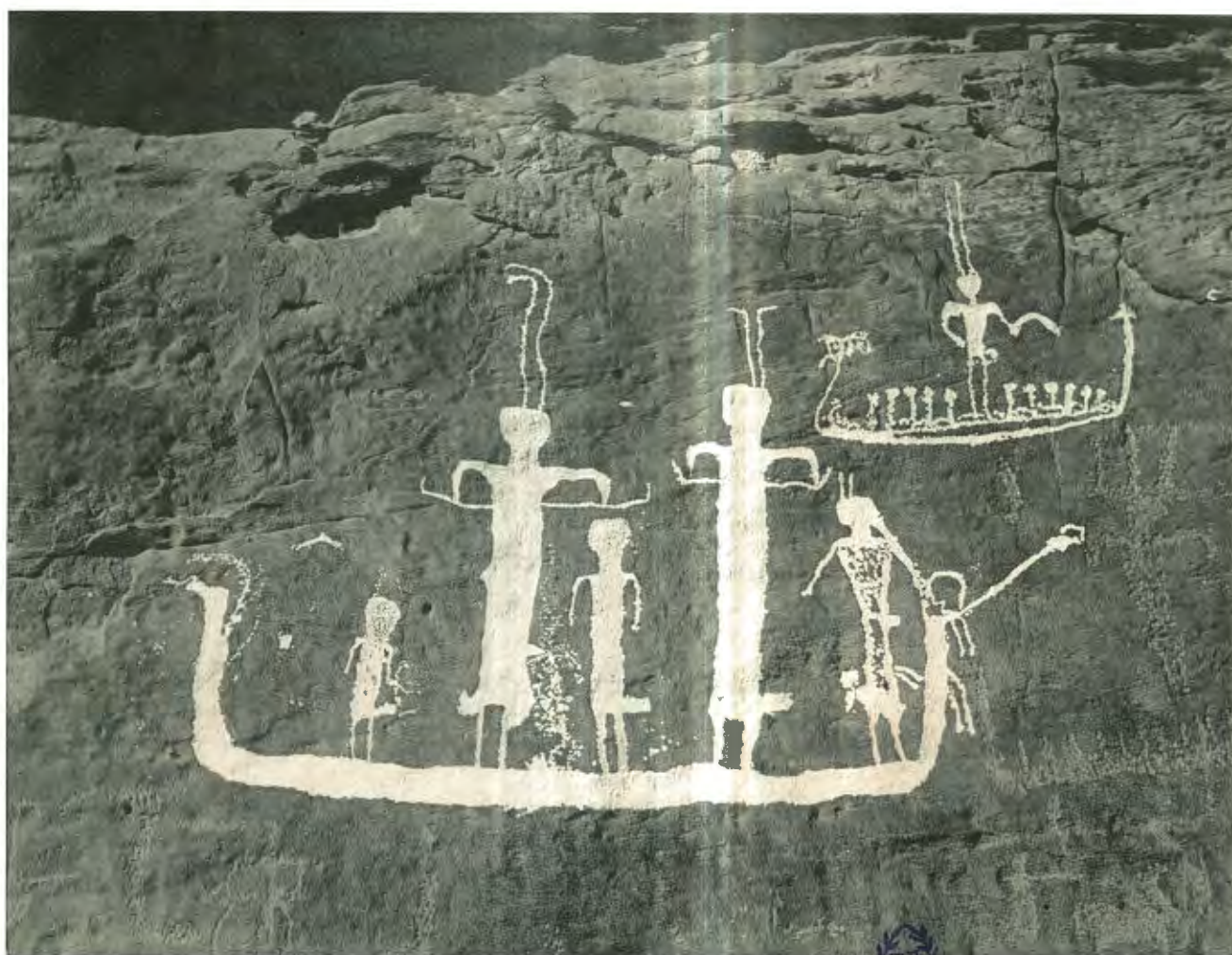






1 ——— 10 cm. See pp. 26, 27.

26. M 219

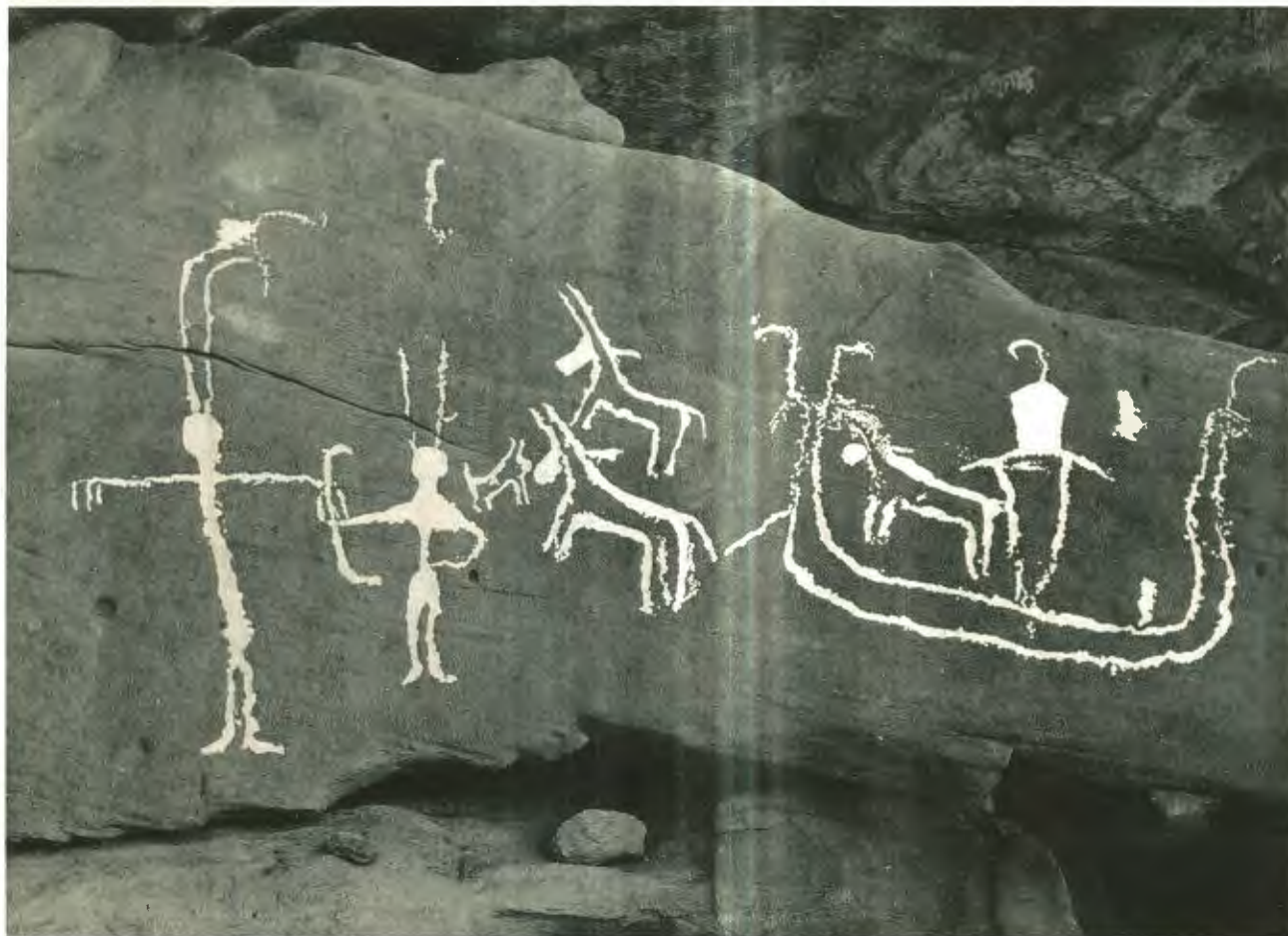


2 ——— 10 cm. See pp. 26, 27, 28.

26. M 237a

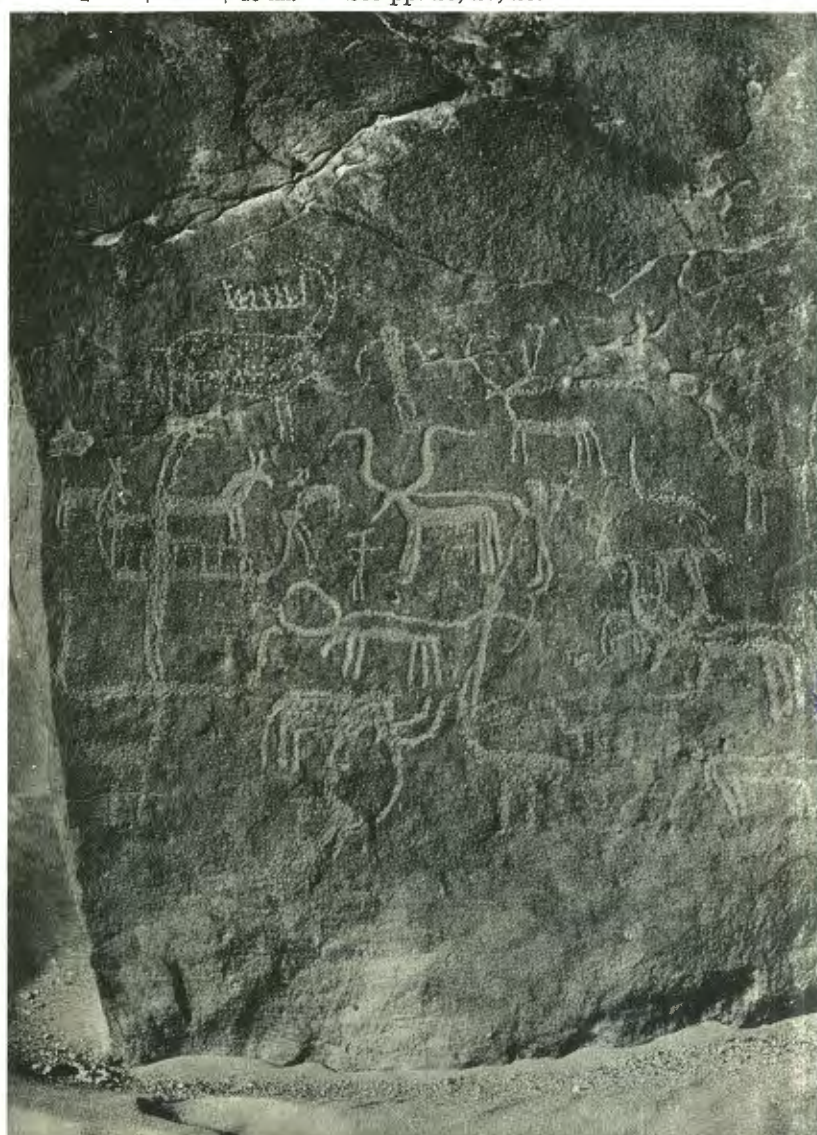






1 |——| 10 cm. See pp. 26, 27, 28.

26. M 222a



2 |——| 10 cm. See p. 38.

26. M 242



3 |——| 10 cm.  
See pp. 26, 27.

26. M 213a





1 |—————| 10 cm. See pp. 26, 27, 28.

27. M 266b



2 |—————| 10 cm. See pp. 27, 28.

13. M 90



3 |—————| 10 cm. See pp. 26, 28.

28. M 288a



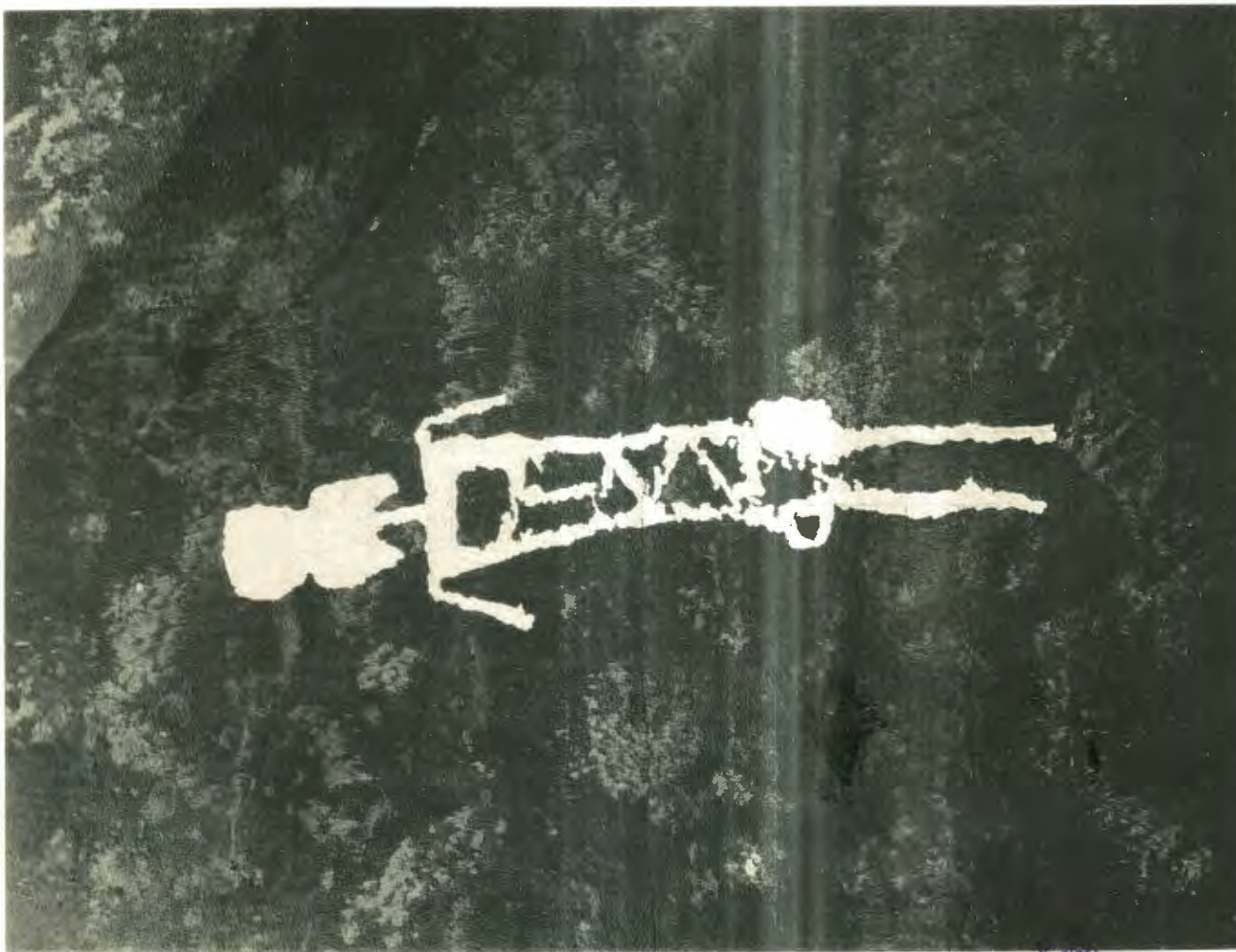




2 |——| 10 cm. See p. 28. 16. M 117b



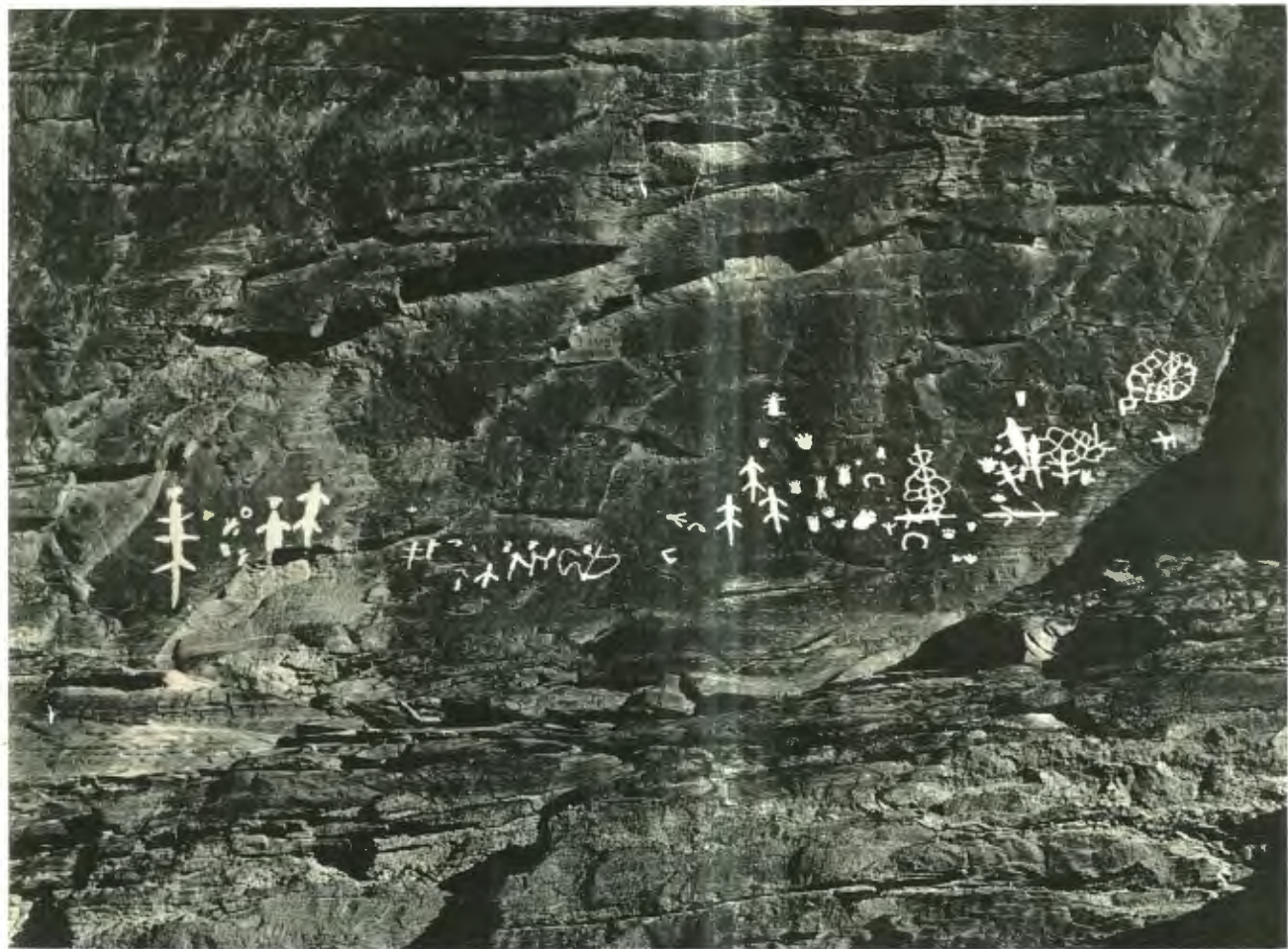
3 |——| 10 cm. See p. 28. 9. M 76



1 |——| 10 cm. See p. 27. 26. M 231a







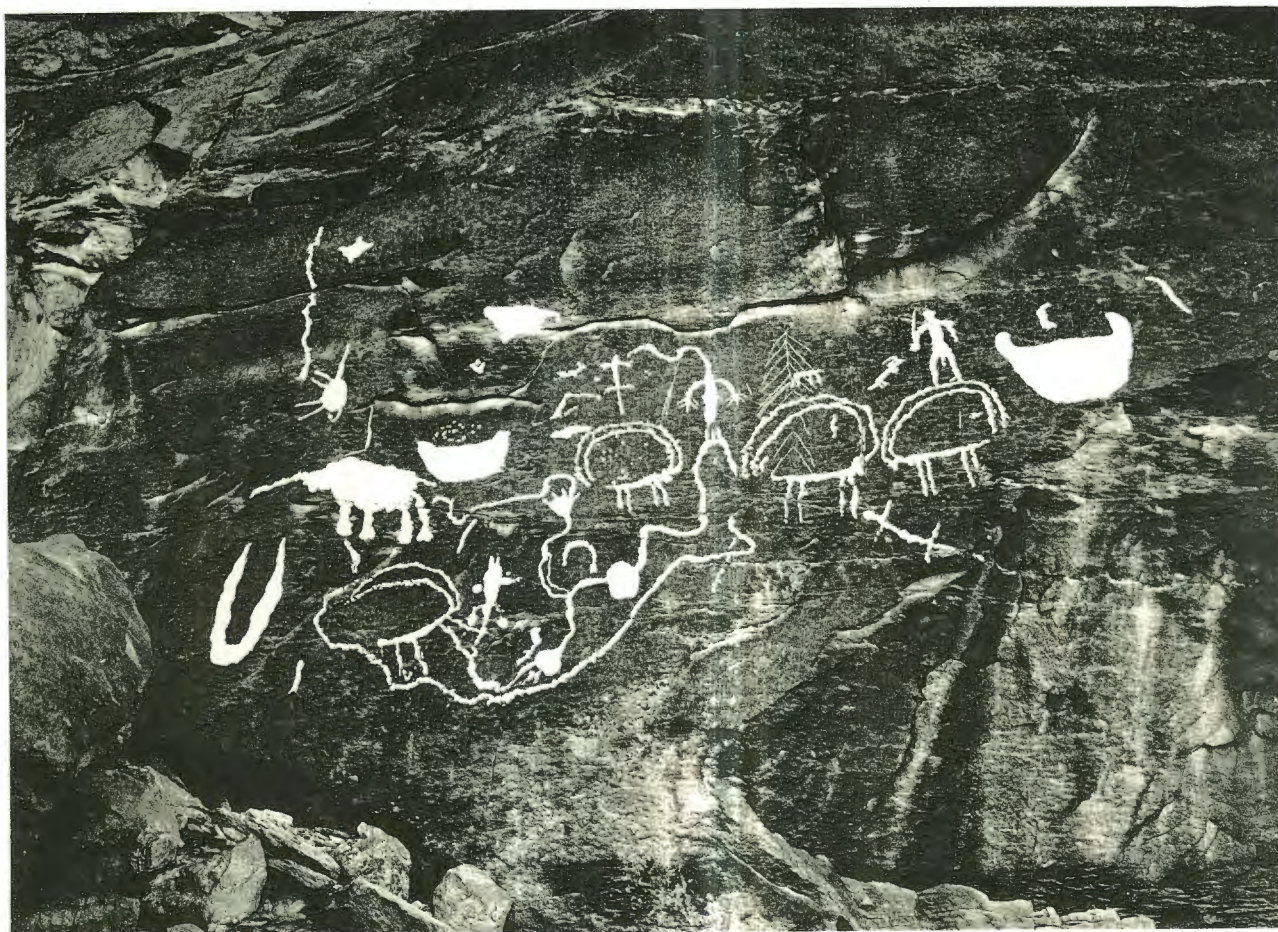
1      100 (!) cm.      See pp. 29, 35.      14. M 92d



2      10 cm.      See p. 29      17. M 123a







1 | 10 cm. See pp. 29, 32.

17. M 126b



2 | 10 cm. See pp. 31, 32.

35. M 436a



3 | 10 cm. See p. 29.

12. M 82a





1 | 10 cm. See pp. 31, 32.

35. M 457



2 | 10 cm. See p. 31.

35. M 455







1 |————| 10 cm. See pp. 31, 32.

35. M 462a



2 |————| 10 cm. See pp. 31, 32.

35. M 446

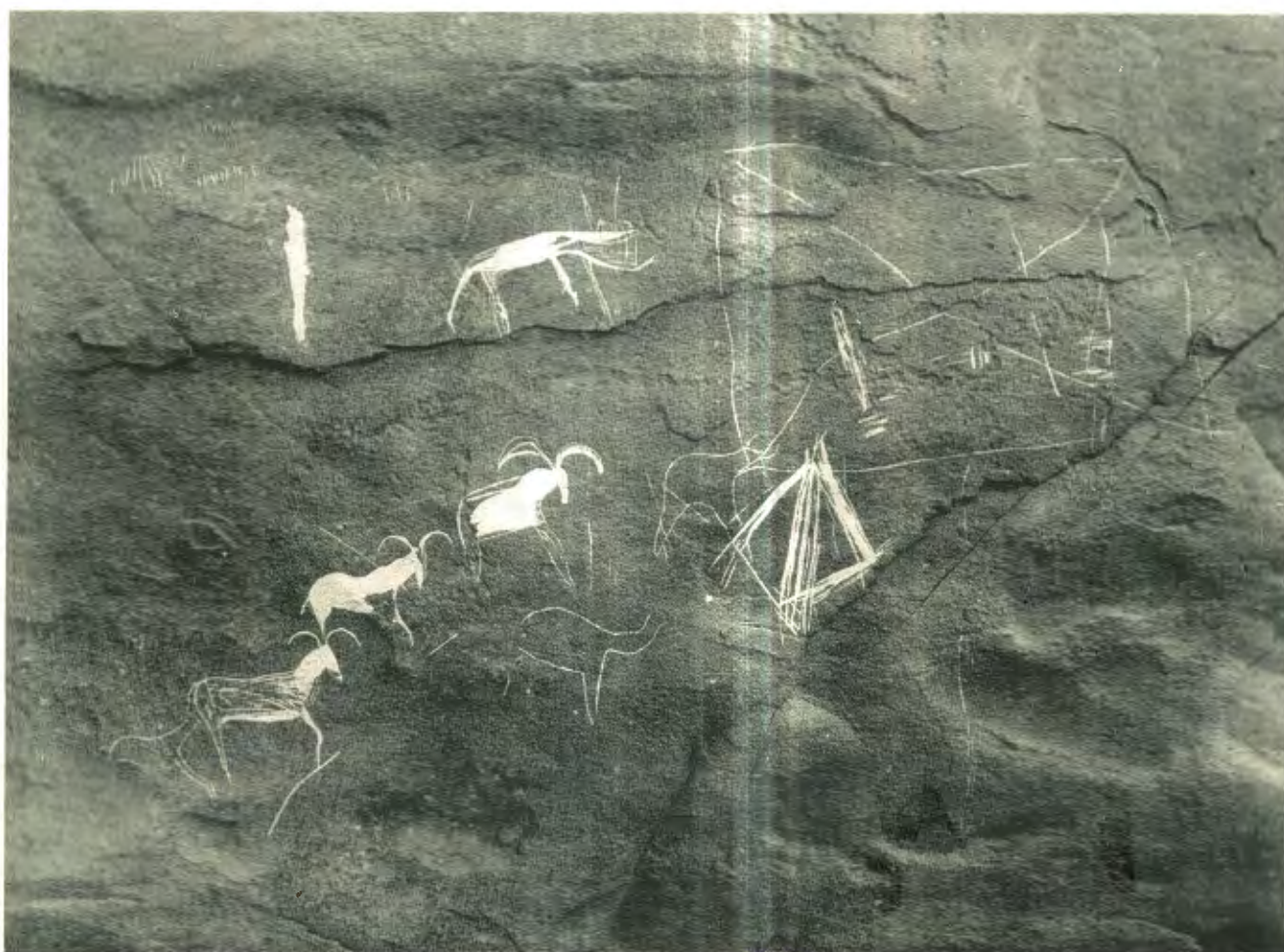






1 |-----| 10 cm. See pp. 31, 32.

31. M 388a



2 |-----| 10 cm. See p. 31.

31. M 391a







1 |—————| 10 cm. See pp. 31, 32. 31. M 384



2 |—————| 10 cm. See p. 32. 31. M 386a







1 |————| 10 cm. See p. 31.

35. M 452



2 |————| 10 cm. See p. 31.

35. M 440a





# SICKLE-BOATS



1 18. M 137a



2 10. M 814



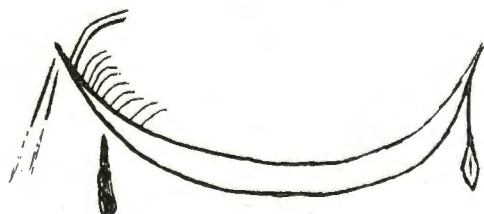
3 35. M 445



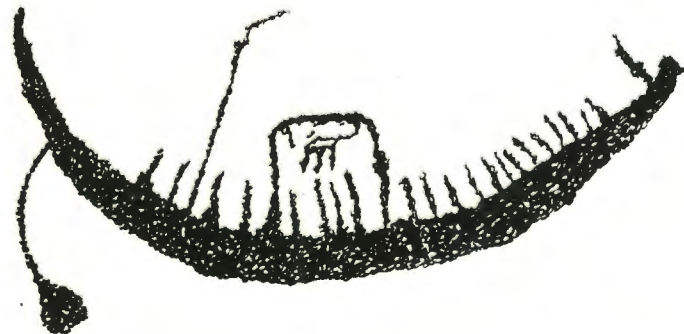
4 VV& Fig. 2 = 2. M 27



5 MURRAY and MYERS Fig. 1



6 12.B



7 5. M 49a



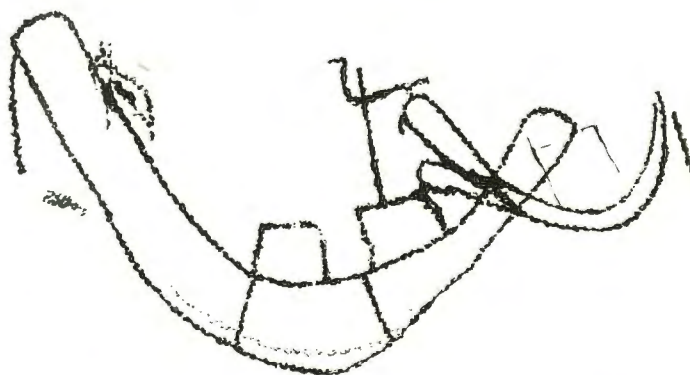
8 5. M 46



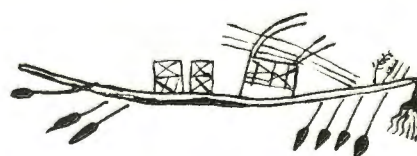
9 8 A.11



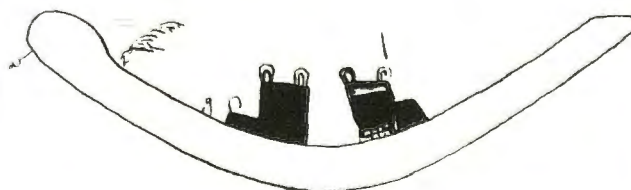
10 VV& Fig. 52



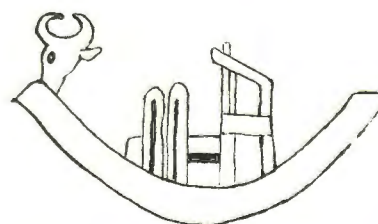
11 2. M 28



PETRIE PREHISTORIC EGYPT  
Pl XXIII 2



QUIBELL and GREEN, HIERAKONPOLIS II Pl. LXXV



BÉNÉDITE, GEBEL EL-'ARAK Fig. 14

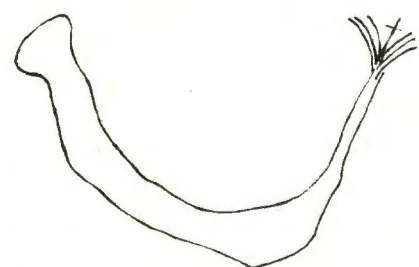




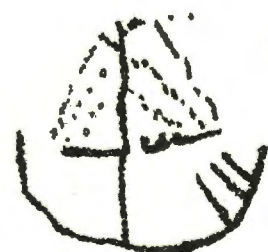
12 5. M 46



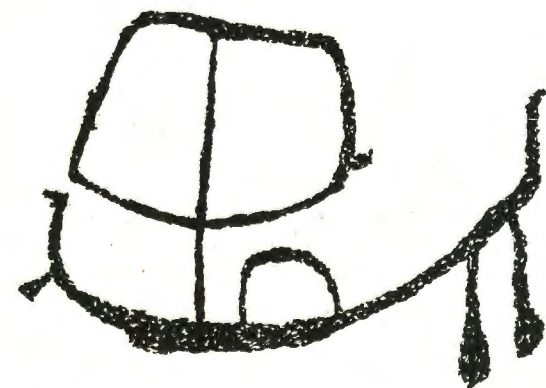
13 34. M 405a



14 MURRAY and MYERS Fig. 2

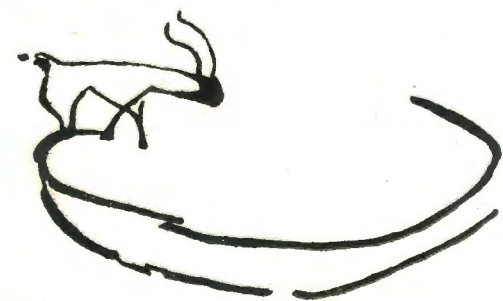


15 18A. M 198



16 26. M 235

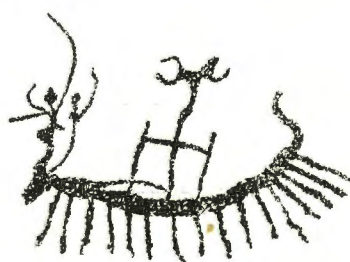
## INCURVED SICKLE-BOATS



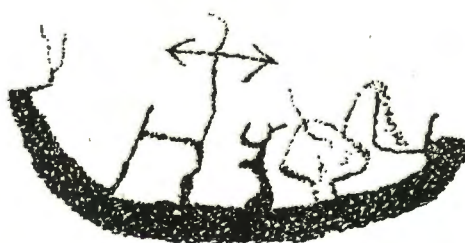
17 34. M 406a



18 2. M 25



19 VV6. Fig. 2 = 2. M 27



20 18. M 137a

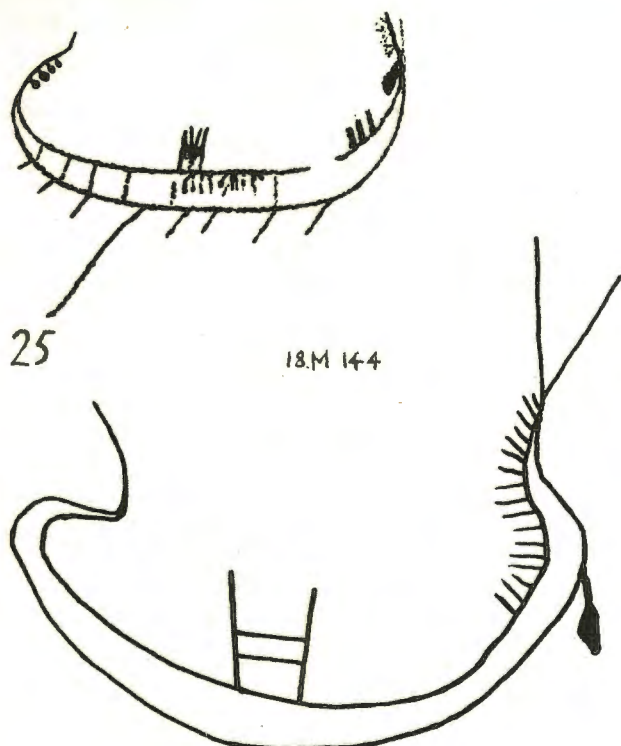
21 WEIGALL, TRAVELS  
PL. XXIX 10 (WÂDI 'ABBÂD)22 WEIGALL, TRAVELS  
PL. XXIX 2 (WÂDI 'ABBÂD)

23 5. M 48

24 VV6. Fig. 46 =  
24H. M 302. 303



# INCURVED SQUARE-BOATS



25

18.M 144

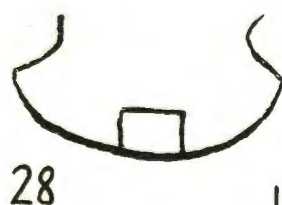
26

18.M 150



27

26



28

1



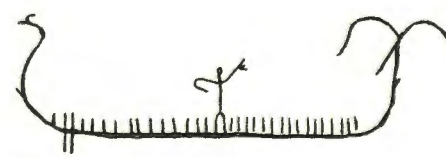
30

VVb. Fig. 4



31

18. M 161



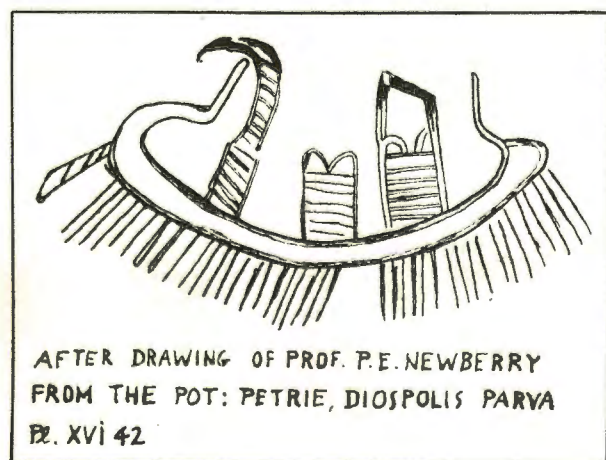
32

GREEN ETBAI DISTRICT Pl. LIII 22



29

26.M 241a



33

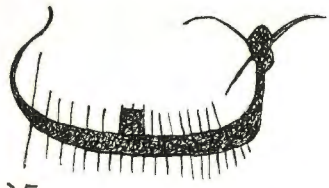
18. M 147a



34

WEIGALL, TRAVELS  
Pl. XXIX 5 (W. ABBÂD)





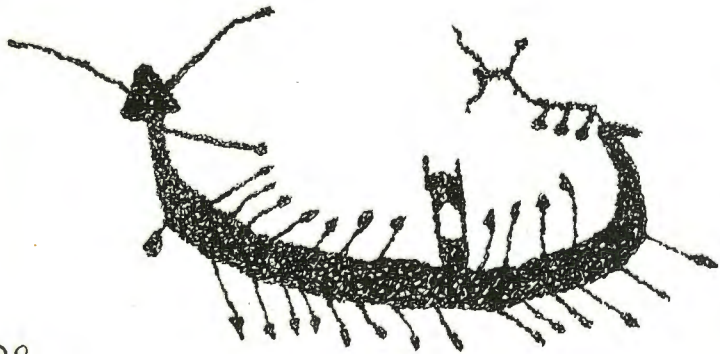
35 WEIGALL, TRAVELS  
PL. XXIX 1 (W. 'ABBÂD)



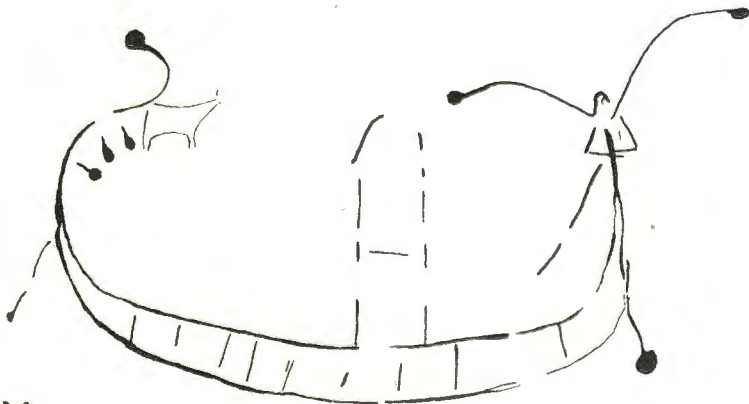
36 WEIGALL, TRAVELS PL. XXIX 4  
(WÂDI 'ABBÂD)



37 WEIGALL, TRAVELS  
PL. XXX 5 (W. 'ABBÂD)



38 38. M 513a



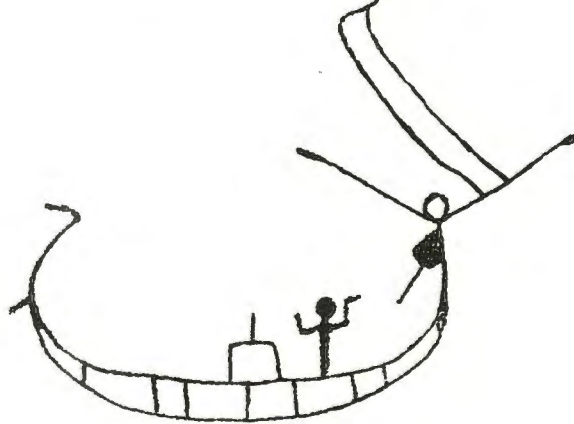
39 24B. M 316a



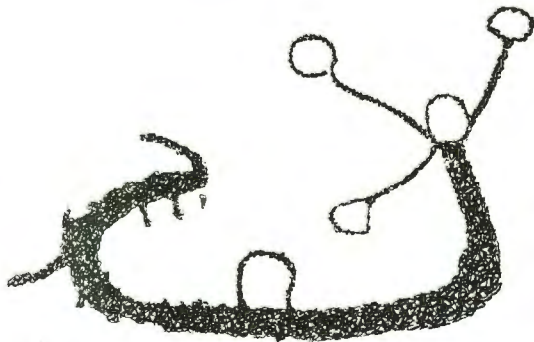
40 6. M 56



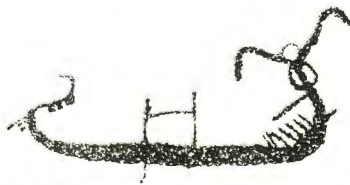
41 WEIGALL, TRAVELS  
PL. XXIX 7 (W. 'ABBÂD)



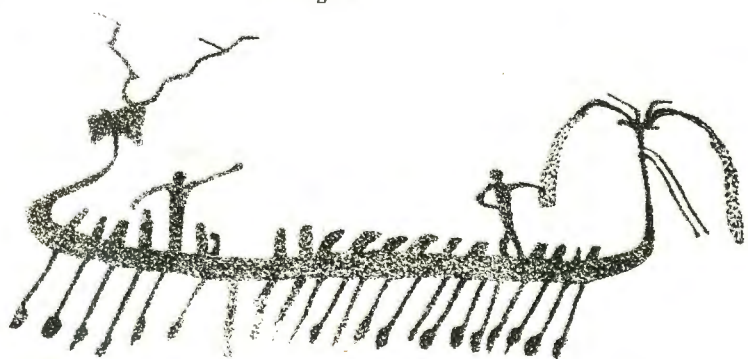
42 2. M 26



43 VV 6. Fig. 5



44 VV 6. Fig. 6



45 15. M 103



46 WEIGALL, TRAVELS PL. XXIX 6  
(WÂDI 'ABBÂD)



47 WEIGALL, TRAVELS  
PL. XXX 8 (W. 'ABBÂD)

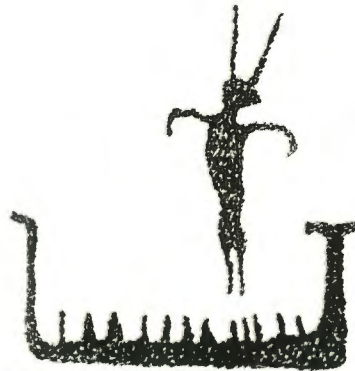


SQUARE-BOATS



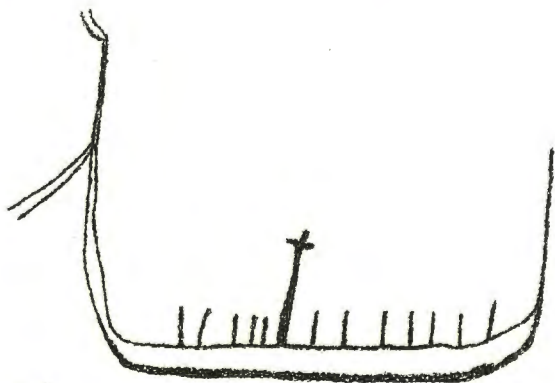
48

VV6. Fig. 31



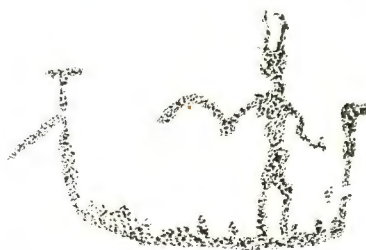
52

26. M 236



49

VV6. Fig. 31 = 6. M 61



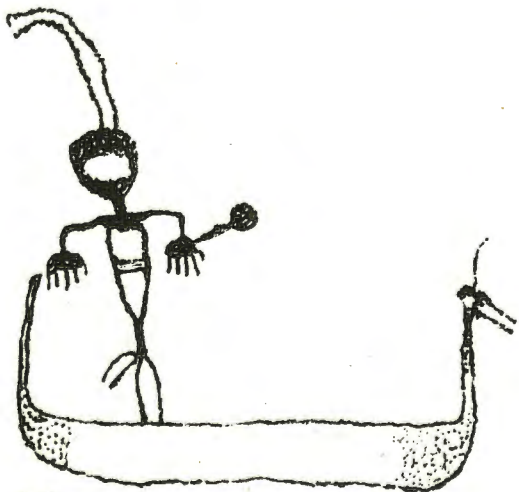
53

26. M 214



54

VV6. Fig. 6



50

26. M 219



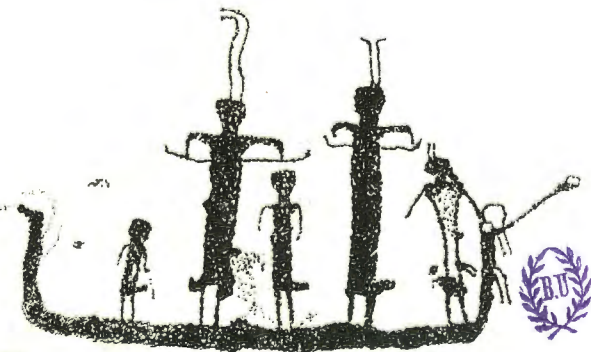
55

VV6. Fig. 6



56

26. M 214



51

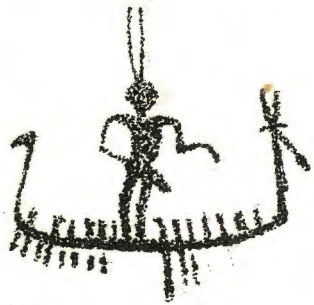
26. M 237a



57

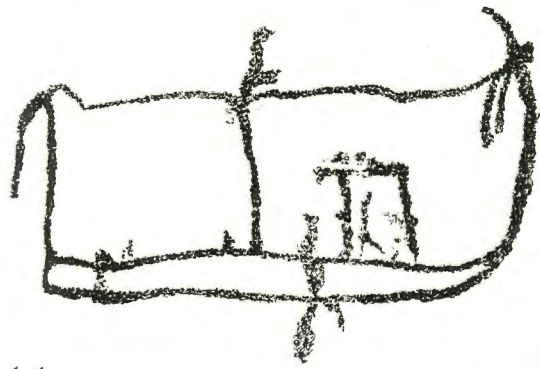
26. M 248





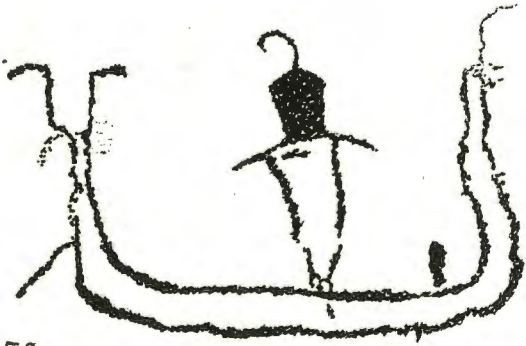
58

26. M 220



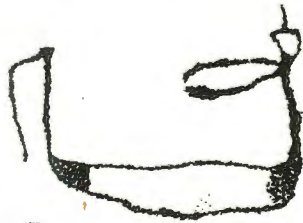
64

VV&. Fig. 37



59

26. M 222 a



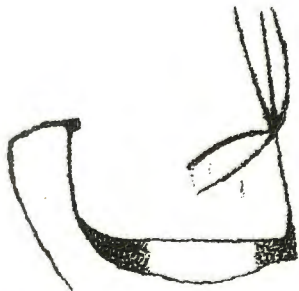
65

26. M 215



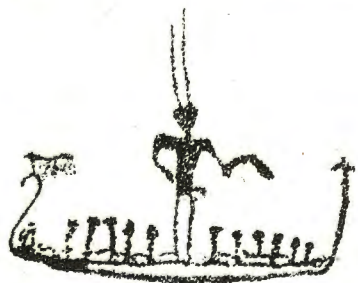
60

21. M 193



66

26. M 215



61

26. M 237 a



67

26. M 228



62

28. M 273



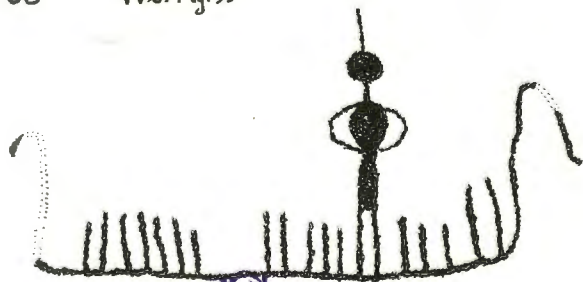
68

VV&. Fig. 35



63

VV&. Fig. 36



69

VV&. Fig. 33



70

VV&. Fig. 22





71

VV& Fig. 21



72

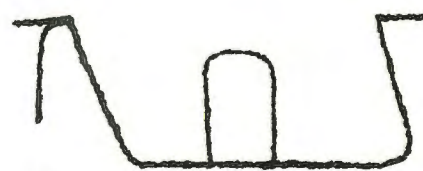
26.M 242

# SQUARE-BOAT DERIVATION B



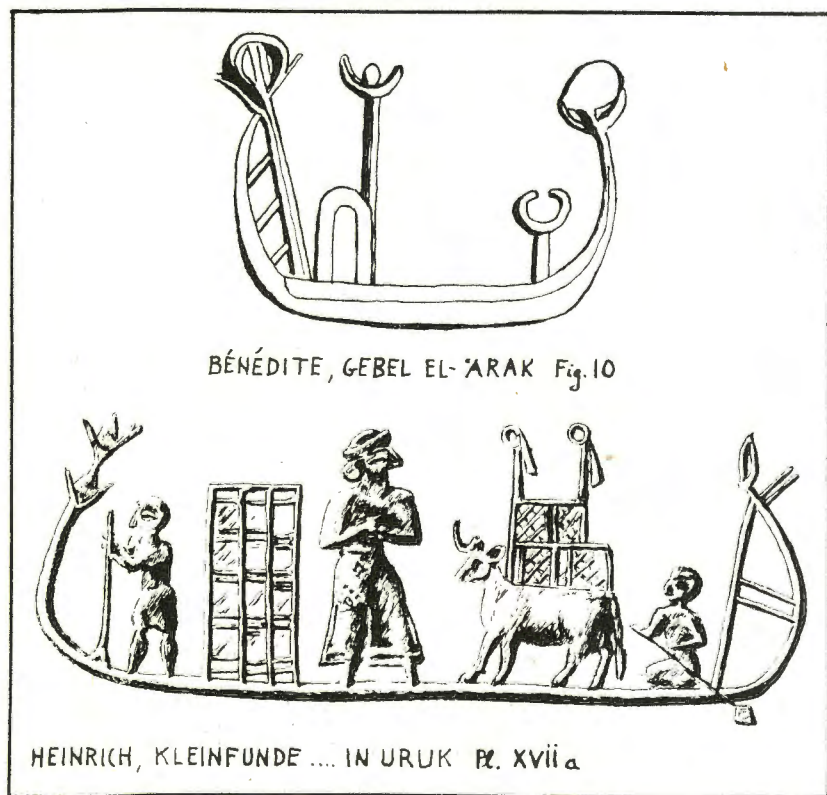
75

26.M 232



76

26.M 232

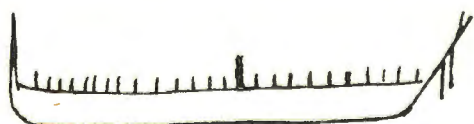


BÉNÉDITE, GEBEL EL-ARAK Fig. 10

HEINRICH, KLEINFUNDE .... IN URUK Pl. xvii a

# SQUARE-BOAT DERIVATION C

## SQUARE-BOAT DERIVATION A



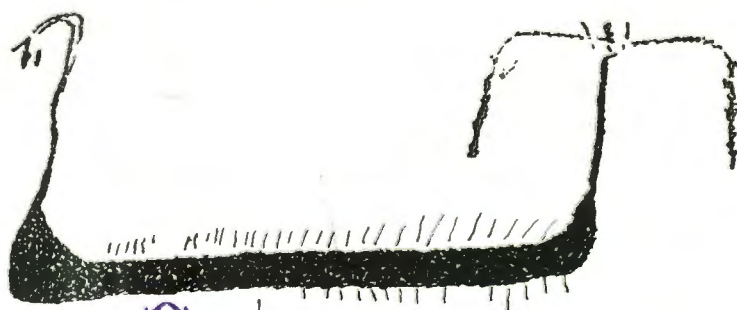
73

30



74

WEIGALL, TRAVELS  
Pl. XXX 6 (W. 'ABBÂD)



77

14.M 93a



78

18.M 147a



79

18.M 147a





80

38. M 509



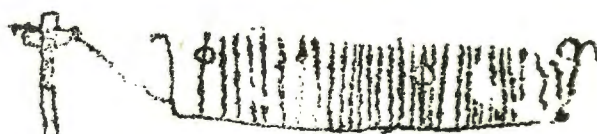
86

18. M 142



81

21. M 193



87

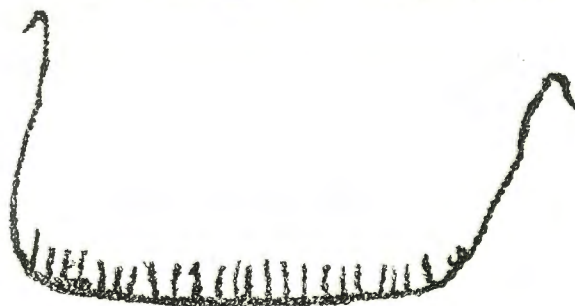
26. M 288a

SQUARE-BOAT DERIVATION E



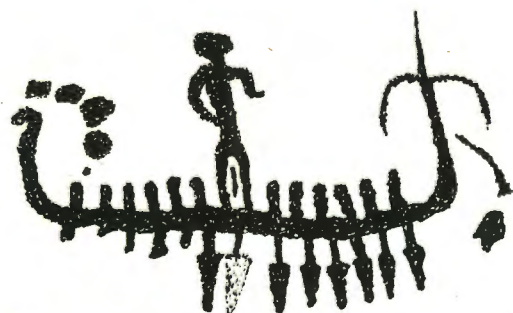
82

39. M 519a



88

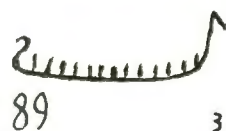
VV6. Fig. 34



83

18. M 176a

SQUARE-BOAT DERIVATION D



89

3



90

1



91

18

SQUARE-BOAT DERIVATION F



84

28. M 273



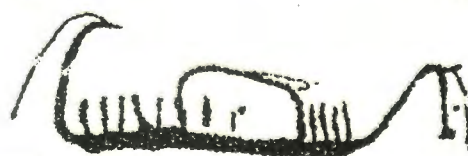
92

VV6. Fig. 35



85

28. M 273



93

15. M 105a





94

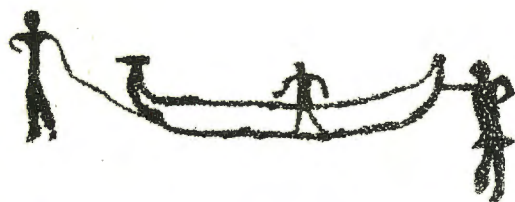
18. M 141a



95

18. M 141a

UNCLASSIFIED

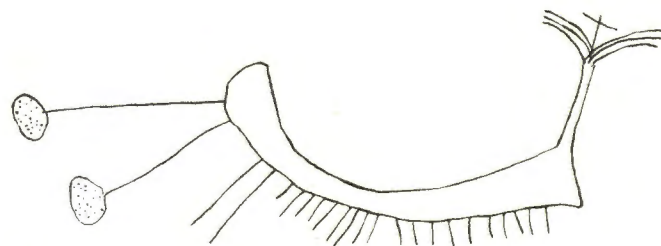


96

VV8. Fig. 32

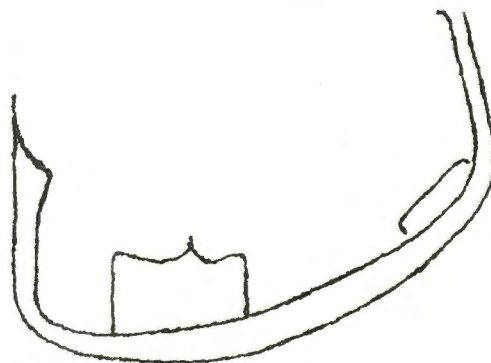


97

GREEN, ETBAI DISTRICT  
PL. XXXVI 31

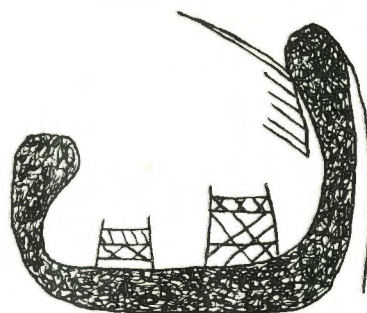
98

MURRAY and MYERS Fig. 3

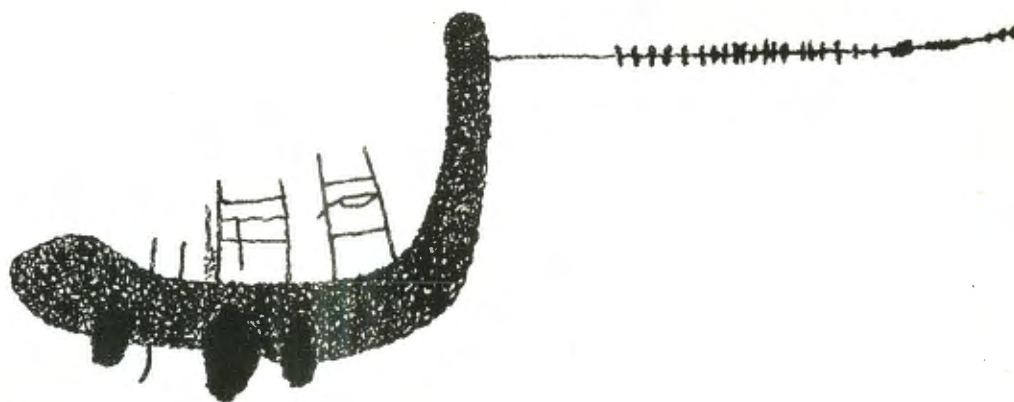


99

18. M 168



100

GREEN, ETBAI DISTRICT  
PL. XXXVI 30

101

35. M 466





